

THE FUTURE OF AMIGA COMPUTING

# AMIGAACTIVE

ISSUE 20

MAY 2001

## Enter the G-Rex

Second A1200 PCI Solution

## Amiga's Future

Piecing it all together

## Get into OS3.9

New Masterclass

## St. Louis 2001

Show Report



## PLUS

Visor Edge

Ideas2Reality

Photogenics 5

Amiga Cyber Café

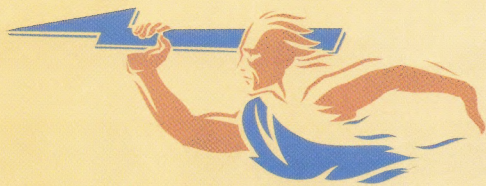
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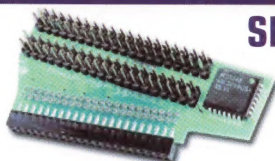
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**SEE PAGE 17**

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## Regulars

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Amiga's biggest partnership to date, and plans for OS4.

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Some heated opinion on the St. Louis 2001 show.

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Stepping out of his tibetan hideaway once more.

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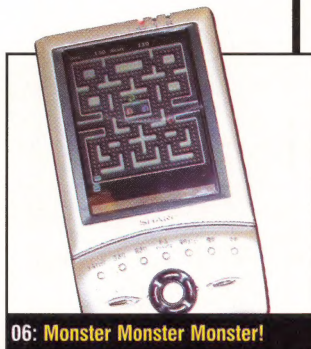
Setting up a cyber café with a PC and some Amigas.

### 62 Next Month

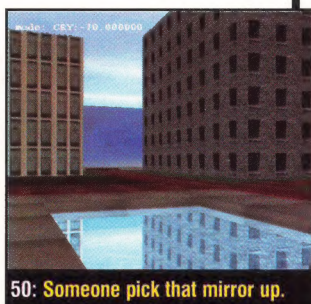
Some of the things we had planned for this month.

### 64 The Back Page

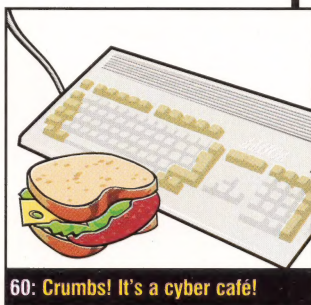
What do Pot Noodles and Audi TTs have in common?



06: Monster Monster Monster!



50: Someone pick that mirror up.

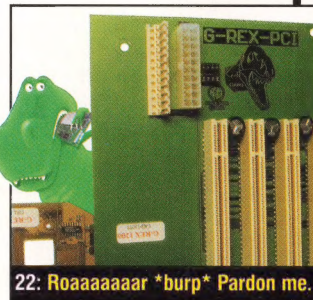


60: Crumbs! It's a cyber café!

## Reviews

### 22 G-Rex

Towered A1200 owners now have a choice when it comes to installing a PCI solution in their Amiga.



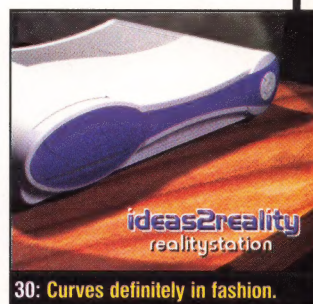
22: Roaaaaaaaar \*burp\* Pardon me.

### 26 Photogenics 5.0

Paul Nolan continues to update his flagship art package - so, now that he's completed a Windows and Linux version, what has he added to the Amiga's?

### 28 Visor Edge

We look at the ins and outs of Handspring's new curvy handheld... and the add-ons you can use with it.



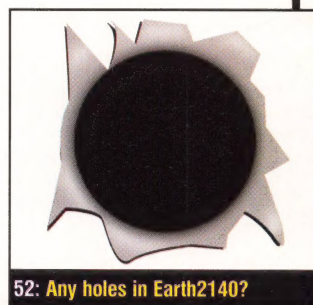
30: Curves definitely in fashion.

### 30 Next Gen Watch

Continuing the curvy theme, Ideas2Reality have drawn up some prototypes of an upcoming computing device which they claim will take things in a completely new direction. Are they right?

### 32 Shareware

What's causing ripples in the Amiga pool of public domain this month?



52: Any holes in Earth2140?

### 52 Earth 2140

Real-Time Strategy continues its resurgence on the Amiga thanks to e.p.i.c. Interactive. Go get 'em soldier!

ACTIVE ONLINE

### Diary of a cyber café

Back in February, the AA/Amiga show needed a network and cyber café. Here's how it was set up.

With the AmigaWorld show in February, the AA/Amiga show needed a network and cyber café. Here's how it was set up.

### "... someone starting a large FTP download would close down the cyber café for everyone else."

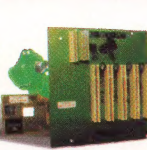
Back in February, the AA/Amiga show needed a network and cyber café. Here's how it was set up.

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### Enter the G-Rex

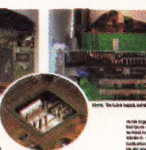
Univers of A1200 towers with MIPS and PPC cards now have a choice to make when it comes to PCI solutions!



Back in February, the AA/Amiga show needed a network and cyber café. Here's how it was set up.



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# Features

## 14 St. Louis 2001

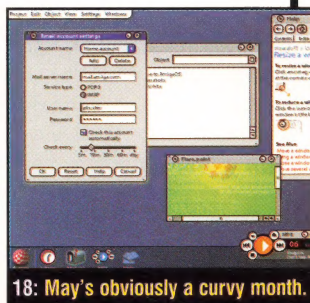
Find out how Amiga Active fared at their second St. Louis show. Complete with pictures of people you've probably never seen before, tales of Nelly's reformation and thoughts on Amiga's announcements from the inimitable AA contributors.



14: Go directly to St. Louis. Do not...

## 18 Amiga's Future

Do you know what's really going on in the world of Amiga? We'll help you come to terms with the future, from short-term plans for an AmigaOne to long-term visions for OS5 and beyond.



18: May's obviously a curvy month.

## 36 Linux

Concluding our Linux Masterclass, we'll tell you how to get your Debian system up and running (no, really!) and where to look for further help and advice.

## 42 OS 3.9

With Amiga's plans to develop their operating system well into the foreseeable future, now's a good time to get to grips with the latest version, 3.9.



46: Shhh! It's Active ARexx.

## 46 Active ARexx

Leafing through libraries with ARexx. We'll show you how.

# AACD 20

## AACD 20

Instead of the usual summary of a few of the items on the CD, missing out on 90% of the content, here is a reminder of some of the regular features of each Amiga Active CD.



## Welcome

This icon initialises the CD and starts up the CD's GUI. We have tried to reduce the dependence on startup scripts (our CDs don't need to be installed in the way Windows ones often do). However, you should run Welcome at least once for each CD. It performs a system check, and warns of any possible problems. It also makes sure that the scripts used by the CD are up to date. Another reason for running Welcome at least once is that it shows you the newsflash page. This has details of any changes to the CD's layout or functions each month.

## Database

The Magazine drawer contains a database of all articles from previous issues of Amiga Active. You can search by product name, keyword or author to find that article with ease!

## SearchCDs and AACD Prefs

SearchCDs will find a file or program on any AACD, Aminet CDs or Aminet. The output is configurable and contains links that let you jump straight to the drawer containing the file, or in the case of Aminet searches, download it. AACDprefs lets you decide how your coverdisc works.

## Amibench

AmiBench is an online classified advertising site. This special offline version uses files downloaded from the web site and copied to the CD. If you are online, you can update the ads too.

## Help!

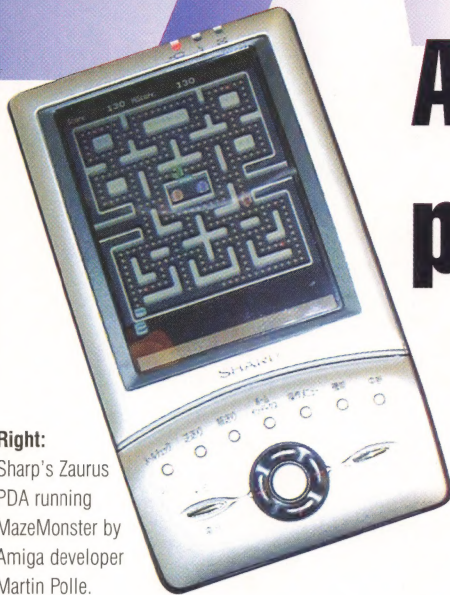
All this and much more is explained in greater detail if you follow the Help link on the front page of the CD's GUI.





# ACTIVE News

Amiga Active brings you the latest news from the Amiga industry. [news@amigactive.com](mailto:news@amigactive.com)



**Right:**  
Sharp's Zaurus  
PDA running  
MazeMonster by  
Amiga developer  
Martin Polle.

## Amiga announce Sharp partnership and OS4.0

### Biggest partnership to date and upgrades to the current OS...

**A**miga used the Amiga 2001 show in St. Louis to outline their roadmap for the Amiga operating system and announce their biggest OEM partnership to date: Japanese electronics giant Sharp. The announcements were made on April 1st, apparently a new tradition for the new owners, whose last major announcements were on April 1st 2000.

The most significant of this year's April 1st announcements was the partnership with Sharp Corporation to provide AmigaDE based content for their Zaurus PDA (Personal Digital Assistant) range, which Sharp will be launching in Europe and America this year. The Zaurus PDA range has long been the market leader in Japan where over two million have been sold, but has lived in the shadow of Palm, PocketPC/WinCE and Symbian PDAs in the west.

Sharp's strategy for promoting the latest generation of Zaurus machines in the west will involve replacing their proprietary Zaurus OS with Linux for the overseas markets. AmigaDE will be available for systems in both countries as a run-time environment, allowing AmigaDE software to run on the Linux- or Zaurus OS-based platforms.

#### How important to Sharp?

The underlying OS means that AmigaDE will not be the only API set to which software for the Zaurus can be written, but the DE will add a range of functionality which, it is hoped, will prove compelling enough to attract most of the attention - and unify software between Japanese and western versions.

While it could be argued that Sharp are not committing themselves totally to the Amiga platform, realistically speaking the PersonalJava support alone means that Sharp are expecting

most third party content to run through the AmigaDE layer. If Sharp positions PersonalJava and the AmigaDE at the heart of their Zaurus platform, they also benefit from unrivalled flexibility in terms of future hardware choices. In comparison, their competitors are limited to retaining legacy hardware or losing their pre-existing software.

Sharp have said that, "the Zaurus software environment will be standardized worldwide by deploying PersonalJava as the international Zaurus software platform, and we will be promoting open-software solutions from a global viewpoint."

Full details of the Zaurus machines due to be released in the west are currently undisclosed, but we understand there will initially be two models. The first will be a Palm form-factor design similar to the E-Zaurus MI-E1 already available in Japan. The second, which is likely to be launched into Europe before America, is a combined PDA/mobile phone. It is interesting to note that Sharp Corporation have just opened up a new mobile division, Sharp Telecommunications of Europe, in Berkshire, England. This department will help lead Sharp's push into the European mobile phone market.

It seems likely that Sharp are attracted by the elements Amiga have been adding to Tao Group's intent, particularly

things like quality of service (QoS) models and - eventually - object scalability, both of which are particularly advantageous features for lower powered platforms with small screen real-estate such as PDAs.

Sharp are also attracted by the productivity of the Amiga's developer community: "Amiga has an outstanding reputation for software development. We anticipate that the alliance with Amiga will create a lot of momentum for the Zaurus PDA," said the general manager of Sharp's Mobile Systems Division, Dr. Hiroshi Uno.

It is a fair assumption that Tao Group, whose intent Java Edition is turning a lot of heads in Japanese consumer electronics circles, provided the initial attraction for Sharp, who started offering intent for download as a PersonalJava solution to their Japanese customers from the 4th of April.

Amiga have said that this relationship is not going to be the only one in this market. Tao Group have already made a deal with Psion Teklogic (Psion's enterprise computing division) along similar lines to that announced with Sharp, just days before this announcement from Amiga. During the St. Louis presentation, Psion were not confirmed as a future partner, but a Psion Netbook was shown as an example of more partners still to come.



# Editorial



## Classic OS equals Future OS

Amiga's announcements also included a roadmap of their planned development for the new OS. To speed deployment of the AmigaDE and provide the underlying OS services which Elate does not currently offer (but which are essential to Amiga's plans for a home server), Amiga will be porting the current AmigaOS to PPC to use as a host environment as well as offering software compatibility with current applications.

The first release of the upgraded OS, version 4.0, will run on the AmigaOne hardware and other PPC - based devices that meet the Zico standard. In a similar fashion to MorphOS, it will have a 68k emulation layer that will allow parts of the OS not yet ported to PPC to run under emulation, as well as

running all old software. It is said that this emulation will run classic 68k applications faster than any 68k-based Amiga.

Amiga OS4.0 is due this summer, and will essentially be OS3.9 with ExecPPC, a new PPC native kernel. It will also have a PPC native OpenGL compatible MESA implementation for 3D graphics, as well as Ami3D, a low-level solution similar to GLIDE for optimum support of "approved" graphics cards - Matrox, initially. It also boasts a new PPC native TCP/IP stack and a virtual memory system.

It will not yet, however, offer the AmigaDE, which will be added to the OS for version 4.2, due out at the end of this year, which will immediately give Amigas access to a large library of Java applications as well as software written directly for the AmigaDE.

OS 4.2 will also contain more PPC native parts, including sound drivers, and hopefully a brand new MIDI system which Amiga's Chief Technology Officer Fleecy Moss tells us, "...should have audio people streaming back..." Part of Amiga's policy is to create niches of technical excellence such as this to help re-establish a stable user base. Other additions will include USB support, a new look Workbench, the SHEEP programming language and possibly Firewire.

Amiga will be developing the APIs and interface of OS4.0 and AmigaDE in parallel. By taking control of the classic OS and using it to develop the foundation for the DE, they have direct control of the underlying OS, allowing them to optimise the performance in the same way as if they were writing these parts purely for a stand-alone version. For more info, turn to page 18. ►

## Month In, Month Out

**A** month is a long time in the technology sector - and so, it seems, in the Amiga market too (yes, I'm pinching myself just to check that I really am saying these words). Just a month ago, we were all looking forward to the St. Louis show. Now we're all reeling from the news... or merely bobbing up and down gently in its wake, depending on what you were expecting after the typically American over-the-top pre-event hype.

For what it's worth, I'm bobbing. My outlook is a lot more optimistic now than it was thirty days ago. Now, you might expect me to say that, but don't get me wrong - it's not as though I'm completely happy (it takes a lot)... there are still plenty of things Amiga have to sort out. But I'm not going to list those things here, because I want to talk about the positive aspects which have emerged from the St. Louis announcements before I reach the bottom of this page, too.

What is most encouraging, I find, is that a sizeable electronics manufacturer has jumped in to the Amiga pond causing little more than a ripple. I don't know - maybe I just wasn't looking hard enough - but from where I was sitting there didn't appear to be the usual backlash to the Sharp partnership announcement that one might have expected given Amiga's track record with major announcements. This is probably due to the Amiga public not really knowing what to make of it all. Aside from the fact that the implications are yet to become evident, Sharp's entry is perhaps a little too big for people to comprehend right now. We'll see.

## Amiga with real Balls?

Another reason to be cheerful is Amiga's decision to bring development of the AmigaOS under their control. Whoa, steady people! I can see you all now, arms aloft, screaming for my head on a stick and gesticulating in the general direction of MorphOS. Look, if Amiga want to re-cover all that ground, so be it. At least they've made a decision. At least they're saying, 'we're Amiga, we're want to be in control of our own destiny, so this is the direction we're going - either come with us or don't' and you've got to admit, that kind of decision-making takes balls - and for once, we're not talking Boing Balls here. Yes, I'm really looking forward to the summer. OS4.0, AmigaOne boards, a week in Spain (no, we're not all going - that's just me)...

But enough of that - let me finish by telling you quickly about issue 20 of Amiga Active. What with this month's St. Louis show report, a feature piecing together Amiga's future and Masterclasses aplenty (ARexx, Linux and a new one covering the ins and outs of OS3.9 that a lot of you have been calling for) we've had to drop Active Media for this issue - but don't worry, it will return next month. Crikey, if things keep going like this, AA30 will have twice as many pages as the magazine you're holding now...

David Stroud, Editor.

A

## The PDAs

No specifications have been announced for the PDAs, but we can assume that the full PDA will be nearly identical to the MI-E1. This has a 32-bit RISC CPU (according to an unconfirmed source a 206MHz ARM part), 16MB RAM, a high grade 240x320 16-bit colour TFT screen and a compact flash interface. It features MP3 audio and Mpeg-4 video playback, and optionally wireless networking standards (such as Bluetooth). It's 81.5mm by 139.5mm in size, with a slimline 20mm profile. The mobile phone / PDA hybrid remains a rumour, but we know that the second device will have a significantly smaller memory footprint and a 220x160 16-bit colour screen.





## The View from Ground Zero

**T**he St. Louis show came and went. Amiga announced it had its first big customer for the AmigaDE, the Sharp Corporation of Japan. It also announced that as well as developing AmigaDE, it will restart development of the AmigaOS, moving it to the PPC and massively extending it to become a world beating digital server.

Normally I would have been at St. Louis and missed the amazing web frenzy but due to mistakes with a visa made during my Gateway era, I now find myself banned from the shores of the United States until September. Thus I got to watch the world wake, receive the information, digest it and spread it around.

This actually proved to be very beneficial because not only did I learn that Amiga Inc needs to do quite a bit more in terms of releasing its information to the world, but I also got to wrestle with many of the rumours and contradictions first hand. There is an old saying that a sword is just a piece of metal until it's been tested in battle, and whilst I like to think that Amiga knows what it's doing, I only have real faith in it once I have got down and dirty with the Amiga faithful.

**"...I also got to wrestle with many of the rumours and contradictions first hand."**

I have not written much in this column about what was said, or about what it means. Amiga Active and I already decided a few weeks ago that that would be best left to another article, and I have duly worked on that as well - it should be somewhere else in this great magazine, and hopefully answers your questions. If not, then please send those questions in to Amiga Active and I will do my best to answer them in a future issue.

What I would like to end with is a beginning. The St. Louis show represented both: the end - of the last five years, of atrophy, stagnation and flirting with death; and the beginning - of the AmigaDE, of our first big customer, and of the AmigaOS moving forwards as it should have five years ago. The future is upon us. Farewell to the past.

**Fleecy Moss,**  
Chief Technology Officer, Amiga Inc.

## Prometheus Unbound

**W**arsaw-based company Matay have suddenly announced that they will be unleashing a third rival PCI busboard on the market. Cue jokes about 'waiting for a busboard for ages, then three come along at once'...

Matay's design, called Prometheus, fits neatly between the G-REX and Mediator market segments, targeting the Zorro III user who has thus far had no PCI solution, and none promised (unless they have the Cyberstorm MkIII or PPC, which will allow the use of the G-Rex 4000 when it comes).

Prometheus works with any Zorro-III based Amiga, regardless of CPU type. The card has four 33MHz PCI slots, capable of communicating with the Zorro bus at 12MB/s and with each other at up to 120MG/s. Matay say that PPC based PCI accelerator cards could "take over control" of the

Amiga, suggesting a similar design concept to the AmigaOne board. The board is small enough that the larger tower cased Zorro III systems can potentially take two cards, for double the number of PCI slots. The downside to all this cramming is that smaller casings may not fit back on with the PCI cards in place.

The Prometheus card will come with a driver CD-ROM, including the Voodoo3 drivers being developed by Hyperion and the Picasso96 team, plus an as yet unspecified sound card and network card. The disc will also include a free SDK with open specifications of the card making third-party driver development as easy as possible.

The Prometheus board is due to be released at the start of May through Matay's distributors, including KDH Datatechnik, Blittersoft, Cubica SNC and Computer City. Pricing of the board has yet to be announced.

[www.matay.pl](http://www.matay.pl)

## Shogo: Here At Last

**H**yperion has announced that their long-awaited game Shogo: Mobile Armor Division is ready and being duplicated as this magazine goes to press. Hyperion have been working on porting Shogo - and the Littech 3D gaming engine it is built on - to the Amiga since late '99.

Shogo: MAD is a high-spec game, requiring PPC, a graphics card and 64MB RAM minimum. Initial impressions from the demo are that it runs extremely well on this hardware. Shogo: MAD is available for pre-order from Titan Computer's web site, and people pre-ordering may get the opportunity to beta test upcoming Hyperion releases Freespace and Majesty.

[www.titancomputer.de](http://www.titancomputer.de)



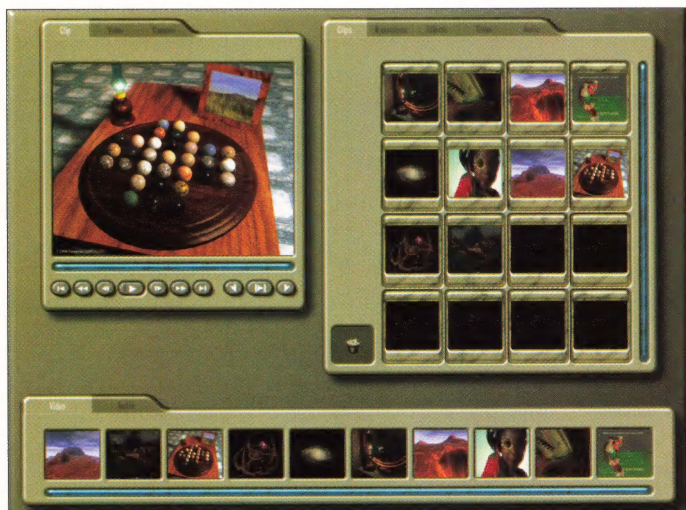


# Kings of Morphing go MorphOS

**T**itan have announced that the video editing package **Motion Studio** will be released in the fourth quarter of 2001 - for MorphOS.

Motion Studio is developed by the team who produced Elastic Dreams and Fantastic Dreams, Titan's Kai's Power Goo-like morphing programs. Motion Studio is a non-linear editing package with a plug-in architecture and over 40 video and audio effects. It will support Firewire video, as specified in the bPlan PegasOS hardware.

[www.titancomputer.de](http://www.titancomputer.de)



Above: Titan's Non-Linear Editing package Motion Studio in action.

## QNX Hits a Million

**O**n April 3rd of this year, QNX Software Systems Ltd. announced that their 'Get QNX' program had reached the million downloads mark. Dan Dodge, CEO of QNX said, "... giving developers a no-obligation opportunity to look at, play with, and build with the QNX RTP has really got their attention."

Another two million copies of the OS have been distributed on magazine cover CDs, but the million downloads represents a million people who are certainly going to install the OS.

This nice publicity boost for QNX happened conveniently just days before the Embedded

Systems conference, where QNX have made a number of announcements. One particularly important one (as far as getting the QNX Real-Time Platform more widely adopted is concerned) is that QNX have increased the range of hardware platforms QNX RTP supports. To the current list of MIPS, x86 and PowerPC comes SH-4, ARM and StrongARM, with X-Scale to follow. While QNX does require a different binary for each hardware platform, good cross-platform compatibility makes this rather less of a problem - code can usually be recompiled to a different processor target with little or no recoding.

<http://get.qnx.com> ►

## Talking Tao



### The intent to change

**T**here's a revolutionary change taking place in the giant consumer electronics manufacturers. For years they've been bringing out a variety of products for the home, office and for mobile that have essentially been hardware dominated. But of course that has to change now as the devices they have to produce become 'smarter'. They themselves have to become smarter at developing software.

In the past they had their own proprietary operating systems. The dominant one in Japan, the world's largest CE manufacturing nation, was iTRON. The technology wasn't very sophisticated but it was sufficient for the time.

Then, as they discovered the requirement for more intelligent televisions (for example), so they began to turn to companies specialising in operating systems to deliver them the software expertise.

Nobody realised that what they were doing was a 'finger in the dyke', and that a software problem was emerging that few had noticed. Each product was being developed individually with its own hardware platform, and using an operating system selected for that single device.

The manufacturers found that the market convergence meant that one product had similar functionality to another in their range of appliances. For example, much of the basic functionality of a PDA would be the same as that of a phone, and increasingly there was commonality between the PDA and the set-top box. But the software driving that functionality was different in each case. Therefore, the companies were paying the penalty for not having a co-ordinated approach and they were continuously reinventing the wheel.

To reduce costs and time to market, something had to change. That change was a centralisation of policy, a single software strategy that would encompass the capability to deliver a consistent platform across all the developments within the company. It would allow them to concentrate not on the basic levels of software, but on adding value, something that would benefit the consumer and allow the manufacturer to differentiate and consequently make profit.

Finding that software to fulfil the strategy then became the issue. And that was where intent came in.

**Francis Charig,**  
Chairman of Tao Group.





## Product Watch

**A**re we there yet? Are we there yet? Are we there yet? No. Stop your whining, go to sleep and we'll wake you up when we get there. And for crying out loud, turn that walkman off!

And so the incessant banter between Amiga children (users) and long-suffering parents (developers) continues, both simultaneously hoping that their car won't break down and praying that they won't run into any traffic jams along the way.

Then, Amiga Active, like a flashing neon motorway sign, illuminates the way ahead so that all can remain calm. Services: 20 miles (sorry, toilets currently out of order).

### Imminent:

- **iFusion** - Tappity tap.
- **Mediator A1200 Z4, Mediator PCI 4000, SharkPPC G3/G4** - Elbox still relatively quiet, though we have proof they are still alive and well.
- **AmigaOne** - Getting ever closer. C'mon Eyetechn!
- **Shogo: MAD** - Still MAD for it. It's in the post.
- **Land of Genesis** - No room/time this issue. Sorry.
- **BoXeR** - We've put our foot in it again, haven't we?

### 3Q 2001:

- **AmigaOS 4.0** - Starting the move to PowerPC!
- **Pianeta Amiga 2000** - Florence, Sep 30 - Oct 1.
- **Standalone AmigaOne** - Let's ask the audience...

### In the distance:

- **AmigaOS 4.2, 4.5, 5.0** - At six month intervals.
- **Freespace, Majesty** - More Hyperion goodies.

If we've missed something out, please tell us! E-mail [upcoming@amigactive.com](mailto:upcoming@amigactive.com)

## DCE Announce PPC microServer

**D**CE, builders of the G-REX PCI bus have announced a PPC PCI card, called the **DCE Microserver G3/G4**. It is a multi-purpose design that can function either as the backplane of a stand-alone system, as a PPC accelerator for the G-REX, as a plug-in module for the bPlan PegasOS for building cluster systems, or as an industrial single PCB solution.

The board will feature a G3 or G4 PowerPC processor running at 450-733MHz with a 1-4MB cache, up to 1GB of



133MHz SD-RAM, 100Mbit Ethernet, and optional FireWire. DCE have announced that the MicroServer will be directly supported by MorphOS, which will allow it to run Amiga 68k software far faster than any genuine 68k system via Just-In-Time (JIT) emulation, due soon.

## Another PDA

**T**hendic Electronic Components GmbH, a German company producing PDAs for industrial applications, have announced that they will use the AmigaDE on a future range of consumer devices.

Their new SmartBoy device will initially target the business to business sector, and will run Windows CE, with a magnetic stripe reader, touch screen smart card reader and barcode scanning options. It can also be used as a mobile phone with the proper add-ons. A consumer version, with AmigaDE on board, will take advantage of SmartBoy's abilities to communicate over mobile communications protocols to offer a fully mobile solution.

[www.thendic.de](http://www.thendic.de)

## News In Brief

### Sad News

Klaus Beukert, one of the leading developers for the Amiga and a part of the Picasso team, has died of a heart attack. Our thoughts go out to his friends and family.

### Trojans confirmed

Trojans seem to be flavour of the month in the Amiga market. The latest release of StackAttack v1.2b includes a Trojan which sends abusive e-mails to Haage and Partner from your computer. Original author Georg Steger said on the news forum Amiga Network News (<http://ann.lu>) that he had nothing to do with this update. FBlit 3.84 is also an unofficial version which runs Trojan tasks. Virus Help Denmark ([www.vht-dk.dk](http://www.vht-dk.dk)) have a new version of VirusExecutor which will deal with these new Trojans. Top work, guys.

### Meet the Feebles

e.p.i.c. Interactive have announced that they will be bringing AdventureSoft's animated adventure game "The Feeble Files" to MorphOS and Macintosh. The Mac version is due in May 2001.

[www.epic-interactive.com](http://www.epic-interactive.com)

### G5 rumours

Rumours of the next generation of PowerPC processors are beginning to filter out. Nothing is being said officially, but the story goes that the G5 will move onto Motorola's recently announced HIP7 manufacturing scheme, boasting a die shrink to 0.13 micron, Silicon-on-Insulator construction and copper interconnects. It is said to conform to Motorola and IBM's shared Book-E spec. for future PPC processors, and will debut at 1GHz, going on to 2GHz+.

### Matrox PCI

Matrox have announced that they will be releasing a PCI version of their Millennium G450 dual-head graphics card, the card currently specified for support in the next generation AmigaOS. The board is due to go on sale shortly at an aggressive \$115US (about £85).

[www.matrox.com](http://www.matrox.com)

### MUI Master warning

It has been brought to our attention that MUI Master020 was uploaded to Aminet by a member of the Digital Corruption group. While this group has released perfectly "legitimate" software before, there have also been elements within this group responsible for uploading Trojan infected software. We do not have evidence that there is a Trojan in MUI Master020, but be warned.



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PCI solution for the  
Amiga, at last!"

David Stroud,  
Editor of Amiga Active Magazine

**AVAILABLE  
NOW!**  
(AND WE MEAN IT!!!)  
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### MAIN FEATURES:

- 4 PCI slots - PCI 2.1 compatible
- 132 MB/s between PCI cards
- Up to 2x faster than A4000 & ZORRO III cards
- Ready to run with existing Amiga 68k and PPC accelerator cards.

### FOUR VERSIONS AVAILABLE

- MEDIATOR PCI 1200, for A1200 in a tower case without bus boards
- MEDIATOR PCI ZIV, for ZIV slot in A1200, tower case with Z-IV
- MEDIATOR PCI for A4000
- MEDIATOR PCI for A3000



Mediator PCI 1200 enables to use high-end PCI cards based on the latest PowerPC G3/G4 processors! The Shark PPC G3/G4 cards, unlike any other PPC card for the Amiga already available, included 256KB of L2 Cache memory running at the same speed of the PPC processors (400 or 550 MHz).

#### The Shark PPC boards feature:

- Two SDRAM modules for up to 1GB of memory in total (512MB each).
- Peak Memory Transfer rate of 528MB/s.
- Increase the performance of the Mediator PCI bus board with transfers at 66MHz, PCI 2.1 compliant.
- Both processors on the Amiga (680x0 and the PPC) run simultaneously and access the PCI cards independently.
- 17.4SPECint95, 11.7SPECfp95, 928DMIPS for the 400MHz and 22.4SPECint95, 13.3SPECfp95, 1276DMIPS for the 550MHz.
- Shark PPC G3/G4 750@400 Available April 2001
- Shark PPC G3/G4 750@550 Available April 2001

£139.95

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### PCI CARDS AVAILABLE FOR THE MEDIATOR:

- S3 ViRGE 4MB graphics card
- 3dfx Voodoo3 2000 16MB graphics card
- 3dfx Voodoo3 3000 16MB graphics card
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- SoundBlaster Live! Value 1024k

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### FOR OWNERS OF PHASE5 BLIZZARD PPC AND CYBERSTORM PPC CARDS ONLY!

G-REX PCI for A1200 - PCI Interface for Blizzard PPC  
Five PCI 2.1 Slots.

32 Bit DMA Mode

Data Transfer Rates Up to 25 MB p/sec

1.76 GB of non bank switching address space

Requires Blizzard PPC

Comes with a complete driver package for:

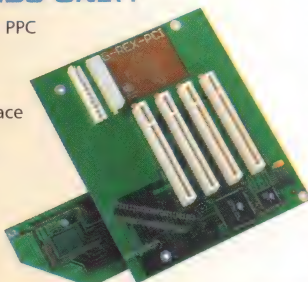
Voodoo 3 2000 and 3000

Voodoo 4 4500

Voodoo 5 5500

NIC 10 MB/sec (Realtek Chipset)

Suits all Amiga 1200 Towers



The new G-REX PCI card for Blizzard PPC 603

The new G-REX PCI card for Cyberstorm PPC

£149.95

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## POWER TOWERS

### A1200 POWER TOWER BARE

Power Tower Bare inc. PSU, universal keyboard interface, PC keyboard, fascia for floppy drive, fitting kit and a full instruction manual. No pieces of wood or strings to keep the motherboard upright as with some of our competitor's products. Simply the most solid and highly commended by all Amiga magazines. Suits all bus boards around. No modifications necessary when using the latest Mediator PCI bus boards with the fastest PowerPC accelerator boards.

£119.95

### A1200 POWER TOWER 1

As above but assembled with a brand new  
A1200 motherboard, floppy disk drive & mouse.

£219.95

### A1200 POWER TOWER 2

As above with Apollo 1240 40MHz, 8MB of RAM, 8.4GB Hard Drive,  
4-way buffered interface, EIDE99 software with AllegroCDFS.

£469.95

### A1200 POWER TOWER 3

As above, but with Apollo 1240 40MHz, 16MB of RAM and 50x IDE CD-ROM drive.

£519.95

### A1200 POWER TOWER 4

As in Power Tower 3, but with 32MB, plus Mediator PCI, Voodoo3 2000 PCI graphics  
card, PCI Ethernet 10/100Mb Network Card with PowerLAN software,  
15" SVGA monitor, external audio port and speakers.

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### A4000 POWER TOWER MK2

Tower case or the A4000. New redesigned bus board with 7 slots Zorro III/III, 5 slots PCI,  
1 slot video. PCI slots are activated by the Mediator A4000 (optional).  
Features also 230watt PSU, 3x 5.25" external bays, 2x 3.5" external bays and  
6x 3.5" internal bays and a full instruction manual.

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## IDE ENHANCEMENTS

### POWERFLYER GOLD EDITION A1200

4-way enhanced IDE/ATAPI controller. Use the latest  
IDE/ATAPI devices at the best of their speed. Don't be  
let behind by the PC users. The most original and  
innovative product for ages according all Amiga  
magazines. Includes FastATA and AllegroCDFS software. The  
former software allows to set the IDE/ATAPI devices, to use Hard  
Drives bigger than 4GB on Amigas with 3.0 or 3.1. Operating Systems  
and to access ZIP and LS120 drives. The latter is simply the best CD-ROM file  
system around and is also the only one compatible with DVD drives (a DVD  
decoder should be available for the Mediator PCI soon). The included manual of 28 pages,  
describes with the help of many photographs, diagrams and tips the simple step-to-step process  
of fitting the PowerFlyer in your A1200.

£49.95

### POWERFLYER GOLD UPGRADE A1200

Upgrade your old PowerFlyer to the Gold Edition and use AllegroCDFS and all the features listed  
above. Kit includes fitting instructions, a new MACH chip, a tool to remove the chip and the latest  
software.

£10.00

### SOCKET RAISERS FOR POWERFLYER A1200

Lift up the PowerFlyer so that the Bvision on PPC cards can fit underneath.

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### POWERFLYER A4000/A3000 GOLD

4-way enhanced IDE/ATAPI controller. Just like the PowerFlyer A1200, it allows to use the latest  
IDE/ATAPI devices at the best of their speed. But it is also possible to keep using the original  
controller on the motherboard and you can add as many of them as long as you have free slots  
on your computer. Don't be let behind by the PC users. For more info check the PowerFlyer 1200  
features. Full instruction manual included.

£69.95

### POWERFLYER GOLD A4000 ROM V2.0 UPGRADE

Update the A4000 PowerFlyer Gold to the latest developments on EIDE technology. Kit includes  
fitting instructions, latest release of the A4000 PowerFlyer software, BootROM v2.0, new MACH  
210 chip, tool to remove the MACH chip.

£10.00

### POWERFLYER Z-IV

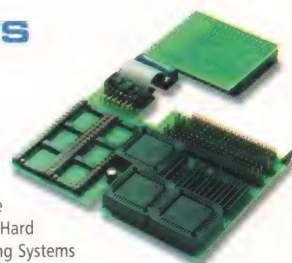
Even faster for owners of the Z-IV bus board for A1200. Just like the PowerFlyer A1200 allows to  
use the latest IDE/ATAPI devices at the best of their speed and it is also possible to keep using the  
original controller on the motherboard. Don't be let behind by the PC users. For more information  
check the PowerFlyer 1200 features. Full instruction manual included.

£79.95

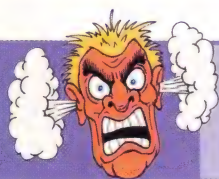
### EIDE99 A1200

4-way buffered interface, EIDE99 and AllegroCDFS software. The former allows to set the  
IDE/ATAPI devices, to use Hard Drives bigger than 4GB on Amigas with 3.0 or 3.1 Operating  
Systems and to access ZIP and LS120 drives. The latter is simply the best CD-ROM file system  
around and is also the only one compatible with DVD drives (a DVD decoder should  
be available for the Mediator PCI soon). The included manual of 18 pages describes with  
the help of many photographs, diagrams and tips the simple step-to-step process of fitting the  
interface in your A1200.

£24.95







## Rants and Raves

# Don't Listen to the Voices...



Good Boing Ball? Bad Boing Ball?

Consulting Editor Andrew Korn

must have been at the  
Lagavulin Islay single malt again.



**I**t was inevitable; the announcement at St. Louis had some people singing the hallelujah chorus, and others baying for blood. It is the nature of the beast. Amiga could announce that Jay Miner's ghost was designing the AmigaTwo and someone would have complained.

It has been a long, long time since we've had anything substantial from a parent company. Inevitably in the intervening period, we've all thought long and hard about what we would do if we were in a position to chose the future course of the Amiga. Some have indeed gone and done something. The Amiga market now is simply too full of ideas for any one plan to get everyone's backing, or for any one plan to include all the various efforts that have arisen from the Amiga community to take the platform forwards.

### In two minds

There's a cartoon cliché of the angel and devil over each shoulder that seems apt to my way of thinking through announcements such as the ones from St. Louis. I imagine myself with a Good Boing Ball over one shoulder, and a Bad Boing Ball over the other. One whispers all the positive aspects of the announcement to me; the other whispers all the negatives.

After the St. Louis announcements, the two Boing Balls have spent most of their time

watching in bemusement as the community cheers or cries foul. In one ear, I get the occasional whisper of discontent about MorphOS and the normal complaining about Amiga's failure to handle their PR correctly. In the other I hear the odd musings about how this ensures the future of the Amiga as a desktop OS in Amiga Inc.'s plans, and the fact that Amiga are getting some serious OEM wins.

It's always a mistake to oversell an announcement. If all we were expecting from the show was a progress update, the announcements of a PPC OS4.0 and AmigaDE running on the Zaurus would have been seen as exciting signs of progress rather than a u-turn in policy that might be considered either good or bad. Opinions are formed as much by the presentation of an idea than the idea itself.

### Talking balls

Bad Boing Ball: "Amiga have dumped their plans for a native AmigaDE and are instead going to run it hosted. They have chosen a proprietary hardware platform to run the old OS on to solve issues such as Memory Protection, despite the fact that it doesn't have those features yet, and will waste a lot of time reproducing the efforts of the MorphOS team, thus splitting the market and betraying some extremely hard working Amiga developers."

Good Boing Ball: "Rather than building a custom MP kernel and hardware driver substructure for the standalone/server version of the DE, Amiga Inc. will be modifying the current Amiga OS for this task. They will convert it to run on the PPC platform everyone in the current market wants, and will bring development of the classic and DE strands together so that the classic OS can offer all the missing parts of the equation to DE, and vice versa, until all the parts are integrated into a fully new desktop or hosted OS. They are already getting OEM wins for the hosted version with major companies such as Psion and Sharp - and have you seen just how cool that E-Zaurus is?"

Amiga Inc. should be more careful with their presentation if they don't want to feed the Bad Boing Ball, because while it has a few points, the Good Boing Ball is closer to the real picture. You might argue that AmigaDE should sit on a stripped-down Linux or QNX kernel, or a new custom kernel, to make AmigaDE native - but should we really complain that they are going to develop our current OS into the new one rather than abandoning it?

Meanwhile, perhaps the best option to avoid a split in the community would have been to have MorphOS become OS4.0 - but MorphOS not being Amiga OS4.0 is not a new thing, so the split was already there anyway. In short, the announcements made in St. Louis were all good things that simply weren't as good as they might have been in an ideal world, and certainly weren't as exciting as they were sold as being in all the preceeding hype - but that's enough to keep Bad Boing Ball muttering for weeks.

Andrew Korn **A**

**"...Amiga could have announced that Jay Miner's ghost was designing the AmigaTwo and someone would have complained."**



# Rants and Raves



## You Have GOT to be Kidding!

Jason Compton rates the latest announcements from Amiga about as highly as he rates Viscorp's - if you don't want the sceptic's view, turn away now!

**I've suffered through many miserably disappointing Amiga announcements. I've even been the bearer of worthless news a few times. Yet somehow, the major announcement that Amiga's first real-world foray would be as a software publisher for an upcoming Tao intent-enabled Sharp PDA was one of the all-time lows.**

Not because it's pie-in-the-sky, but because it has no redeeming value and seems likely to come to pass. In other words, after nearly four years of work by essentially the same two core characters (McEwen and Moss), this was the best they could do.

interesting and revolutionary, rather than just bang out some software for a Java virtual machine on an obscure PDA platform for a generic electronics manufacturer.

Indeed, Amiga director of development support Gary Peake's entire presentation at St. Louis was loaded with snippets that, while intended to inspire gee-whiz good feelings among the crowd, actually reinforced Sharp's low-tech reputation. In no particular order, he said Amiga had fixed memory leaks in Sharp's existing PDA OS (something unacceptable in a PDA, meaning Peake is either exaggerating, or Sharp ships lousy product), claimed that Sharp's engineers

checking users to a subscription model. And when asked about non-game alternatives, Peake actually suggested that Amiga developers would do well writing contact managers for PDAs... as though there aren't about 1800 perfectly good alternatives out there already. Brilliant growth potential, Gary.

### What growth?

Speaking of growth, the PDA market is extremely depressed right now, with revenues dropping and inventory building: Palm Inc. tacked on nearly £50m in inventory last quarter and expected it could add as much as £143m this quarter. That means two things.

**"...these 'engineers' must be living under a particularly dark rock if they've missed the freeware/open source movement of the last decade..."**

Pardon me, but...Sharp? Purveyors of low-end TVs and VCRs? Theirs is not exactly the first name in innovation. While Sharp has been in the portable organizer space for quite some time, their lunch was completely devoured by the coming of Palm and Windows CE. When will people learn that companies with little taste, experience, or flair for innovation rarely innovate? Does anyone remember Gateway?

### So you say you want a revolution?

If you're not with me so far, understand that I thought we were all waiting around for an "Amiga" company to do something truly

were floored by some Amiga-coded intent games he admitted were primitive, and were flabbergasted by the freeware that populates Aminet. While Aminet is certainly a remarkable achievement for any platform, these 'engineers' must be living under a particularly dark rock if they've missed the freeware/open source movement of the last decade.

Maybe you don't care - maybe you just want to jump on the Amiga/Sharp/Tao gravy train. Forget about that, too, because Amiga's proposed revenue models for developers are nonsensical. Peake's example went something like this: Users will pay subscription fees for Amiga/intent-powered software, or pay various small, ongoing fees for expanding games, like \$10 for a race game, \$5 for extra cars, \$5 for extra tracks.

But subscriptions and ongoing payment is only going to work for must-have enterprise applications or obsessive multiplayer RPGs like EverQuest, not for the "time-killer" devices Amiga is planning to inhabit. Even a massive company like Network Associated (McAfee) lost their shirt trying to shift virus

For starters, it means that the companies who are leading the space are having a difficult time making money. It ALSO means that they're going to have to clear out that inventory with consumer-attracting prices, essentially flooding the market with some very nice, flexible devices which already have thousands of delightful software titles available. Any Amiga user who then tries to argue that someone will replace their shiny new PDA with an Amiga-approved model a few months later needs to take a careful look at his or her computer purchasing frequency.

In truth, I shouldn't be this disappointed, because for all their attempts to pretend they're brilliant visionaries, Amiga Inc. is, for all intents and purposes, a marketing organization for Tao with modest aspirations to be a virtual software label. If you were expecting greatness, think again. But if yet another fourth-class attempt to revive the name and spirit of a third-place computer platform excites you, then by all means, keep your sights locked on Snoqualmie.

Jason Compton **A**

## interact !

Agree? Disagree?

If what you've read on these pages has made you think, we'd like to hear your views. Write to us or email the usual address...

[interactive@amigactive.com](mailto:interactive@amigactive.com)





# Question:

## What's red, white and black all over?

Answer: Amiga Active's weekend in St.Louis!

**YOU ARE HERE!**

**T**he Amiga 2001 show in St. Louis, the second we have attended, was the first in it's new venue - the hotel it has been in until now is being turned into an extra runway for the growing St.Louis airport. Mind you, when we say the hotel was different, it was to tell the truth very similar to the old building - what is it with Americans? Why do they think that anything English has to be mock Tudor? It was like taking a step back in time. We hoped that the show itself would be a bit more forward-looking.

**"...what is it with Americans?  
Why do they think that  
anything English has to be mock Tudor?"**

### SECOND OPINIONS

Amiga Active's contributors were invited to give us their own take on the St. Louis show and the announcements Amiga made at the event...



### Not too Sharp

The announcement of Sharp as the partner that will employ AmigaDE software on their upcoming range of PDA (Personal Digital Assistant) devices is not really as earth-shattering as it could have been to me. As a high street brand in the UK, Sharp have not been at the forefront of consumer buying for a good number of years. I find the recent news that Handspring is looking for an alternative Operating System when their PalmOS licence expires in 2004 is more exciting. I'm sure we have not heard the last of more strategic partners, and the next few months should reveal more.





**Above:** There's something in the air... • Joe Torre assaulted by killer optical mice. • AmiOpoly... the board game of would-be champions. • (sing) Cheer up, Ker-mit Wood-all... la la-la-la la.

**“...police cars, ambulances and fire engines rushing past a queue of people, five deep, which stretched for hundreds of yards.”**

inform us that a fight had broken out inside the venue, the crowd was out of control, and the situation had escalated to the point where it was deemed unsafe to continue the gig. Getting back on the coach for the journey back to the hotel, we hoped the Amiga show would prove a touch less chaotic.

#### Back to the future

Up bright and breezy the next morning, first stop was breakfast. Lots of familiar faces graced the breakfast bar: Petro Tyschtschenko, Gary Peake and various employees of Haage & Partner, to name a few. Notable absentees were Amiga's Chief Technology Officer, Fleecy Moss (who we later discovered couldn't attend because of problems with his Visa - a hangover from the Gateway era - nothing to do with the Foot & Mouth

and a retarded customs official) and Amiga President Bill McEwen, whose presence was rather low-key this year.

After breakfast, our attention turned to the show: the schedule for which was packed with talks and seminars, beginning that afternoon at 1:30. American shows are very different from shows in the UK. The hall itself consisted mainly of tables (as opposed to proper stands) where people displayed their products. Although not wholly unexpected, there seemed to be more second-hand equipment on display than new.

The company with the biggest stand was Merlancia Industries, who were showing off a stainless-steel case intended for a Zico-specification AmigaOne compatible that they are planning to produce. Stainless steel cups continued the metallic theme, with A1200 Magic Packs and SDKs also on sale - a little something for people who already have enough stainless steel, perhaps. Merlancia's Director, Ryan Czerwinski, had even gone to the trouble of producing stainless steel business cards. He was, however, unable to get his DeLorean onto his stand - the show venue was in the basement of the hotel and there was no access for cars, much to Ryan's disgust.

**“He was, however, unable to get his DeLorean onto his stand...”**

In the corner of the hall, Mr. Hardware was causing a bit of a stir with a new product: a full PC on a board. The card was shown in a big box Amiga, plugged into a Zorro slot. However the design doesn't actually require the slot for anything more than holding the card in place didn't actually use the slot for anything, except for holding the card in place - it could have operated just as well sellotaped to the side of the case). We were told that when fully functional, the PC-on-a-board would be able to use the same mouse and keyboard as the 'host' Amiga. Various leads trailed off the board to the Amiga's rear, where USB, serial, parallel and other PC ports were located for easy access. There were two versions of the card being shown: one running at 600MHz, the other using a 1GHz processor with 10/100 base-T Ethernet capability. Although good in theory, the only thing it was using from the Amiga was the power supply, so it wasn't really as good as it first appeared: take it out of the Amiga, put it in its own case with a PSU, and you'd have just an ordinary PC. Nice idea, though, if you only

The news of a fully PPC based classic AmigaOS 4.0 should be good news to all those PPC pushers, and should be available quite quickly, even if Haage & Partner are not going to be the sole contractor on this project.

The AmigaOne computer has been denied a desktop version of AmigaDE, limiting its usefulness as a new platform - but by employing OS 4.0 it will bring new life to the classic Amiga line. The advent of an AmigaDE layer within OS 4.2, when it arrives, should inject more functionality with the future Amiga powered machines yet to hit the streets.

**Simon Archer**







## The Good, the Bad, and the Unacceptable

**Good:** It's always good to see smiling Amiga faces. Dave Haynie and Leo Schwab in the same room was a treat, worth the price of admission for autograph seekers. Decent showings from overseas developers such as Individual, Cloanto, and Eyetech expanded the roster of available products, since North American development has lagged for some time. Merlancia showed willingness to spend lots of money, from by far the show's largest booth to its stainless steel business cards and the proprietor's DeLorean. Now it needs to find productive outlets for that flamboyant cash, and actually put a computer in those shiny custom brushed steel cases that were on display. Petro was as generous with pins, and as eager to shake your hand, as ever.

**Bad:** The show's energy level was low. It was a largely lifeless atmosphere with very little substantial new product to talk about. The Saturday evening pop had mostly faded by Sunday morning. When the board game "Ami-opoly" gets some of the heaviest in-show promotion for "new products," something is wrong.

**Unacceptable:** The show's organizers need to be briefed on what a "keynote" address is. The event's morning keynotes were vague rally sessions. McEwen's meaty Sharp presentation was placed in the expensive nighttime banquet. Note to organizers: news is for everyone.

Jason Compton

wanted one box on your desk capable of running the AmigaDE on top of Windows or Linux, in tandem with your Amiga - and of course very convenient for hardcore Siamese users.

Opposite the entrance to the hall, Nova Design were showing off their software. Blow-up 'beanbags' allowed visitors to sit in relative comfort while they watched Kermit Woodall give demonstrations of ImageFX and Aladdin 4D. Behind Nova Design, next to the worryingly named Queens User Group, Haage & Partner were showing the latest versions of AmigaWriter and ArtEffect.

There were many other individuals and small companies selling second-hand Amiga products, including FWD Computing, AEMail, CompuQuick, Cloanto. Jens Shoenfeld was back this year with several pieces of clever hardware gadgets which, as is the custom, elicited much discussion amid the more technically-minded. Everyone seemed to be very busy throughout the show.

## Roast Petros

As mentioned in last year's St. Louis report, however, the excitement in America doesn't end when the show closes its doors. On the Saturday evening, there was a quick dash to get ready for the banquet. Naturally, we were one of the last people to arrive on account of production editor Russell Trent, who took so long preening himself in the bathroom.

This was where Bill McEwen was due to give his keynote speech - so anyone not willing to pay for the banquet wouldn't get to hear what he had to say. Not the best arrangement for a keynote speech and Amiga's biggest announcements for a year. Before the announcements ushering in the new, it was time to usher out the old.

The banquet events kicked off with a retirement "roast" for Petro Tyschtschenko. Lots of people stood up and talked about Petro, telling the packed banquet hall what a great guy he was and how he kept the Amiga together for so long - although mostly they talked about his driving. Apparently Petro should have been a racing driver rather than promoter of the Amiga.

Then, the part of the evening everyone had been waiting for: Bill's keynote. He told everyone that Amiga were a software-only company, and were not intending to produce hardware, a job which will be left up to their partners and other third-party companies.

During his speech, he produced the mock-up of the MCC, first shown several years before in London by Jim Collas. Bill used this to illustrate how little Gateway actually did towards making a new computer - nice case, but what else?

## "Bill then announced Amiga's partnership with Japanese electronics giant Sharp..."

Bill then told everyone that Amiga will continue to develop the Amiga OS and move it over to PowerPC, an announcement which met with approval from the crowd. The AmigaDE, he said, would eventually run on top of the AmigaOS, in the same way that it will run hosted on top of Windows or Linux. Bill then announced Amiga's

**Below:** Someone on the Dayton Amiga User Group stand stubs his toe. • Marcus Nerding and Alan Redhouse get down to some serious drinking. • The facial hair society get down to some serious...







**Above:** No cheap gags about the 'Queens' usergroup, please. • Petrol Behind you! ...Oh, it's a cake. • Cups: not running the DE... yet. • Gold-plated C64? I've got three. Thanks all the same.

partnership with Japanese electronics giant Sharp, and showed a PDA (the Zaurus) running a couple of games that Amiga had coded running on top of Tao's Elate OS. The crowd applauded. McEwen went on to say that lots of other PDA manufacturers are looking to Amiga for content to run on their devices, but he was unable to name any more names. Bill then introduced Alan Redhouse of Eyetech, who delved into a small bag by his side and pulled out a motherboard which he revealed to be the AmigaOne (completed but not fully working yet), adding that the new Amiga OS will be written specifically to run on the board.

The keynote continued for around an hour, and listening to Bill and Alan, we got the impression that things were finally happening, and that the Amiga market was turning around.

Although smaller than last year, organisers Bob and Diane Scharp are to be commended for putting on yet another good show. We'd also like to thank all those who took an interest in *Amiga Active* - either by taking out a subscription or purchasing some of the back issues we took with us - we just wish we'd taken more, as we sold out of back issues within two hours!

A

**"...we got the impression that things were finally happening..."**

## Quake or tremor?

I couldn't make St. Louis this year, so like most of you I heard the details of Bill's announcements from thousands of miles away via the Internet. I can't even honestly say that I rushed to read the news - most of my Internet activity that night involved organising traditional Planetarian end-of-round mad space battle action. The promises of earth-shattering announcements didn't really grab me because from what I know in advance I wasn't expecting more than a little seismic hiccup. I don't think I was wrong.

In my view, that's not a bad thing. Most of us have been willing to give this latest incarnation of Amiga Inc. the benefit of the doubt. They've outlined their plans, and while there's still a lot more we'd like to know, most people feel that Amiga are heading in the right general direction. There are some details we may argue with but at the same time we had been told to expect good OEM partners, we're all awaiting the AmigaONE and we've already been promised a new OS soon.

That's the problem for Amiga. If going in the right general direction is what we hope of them, we'll only get excited if we see them heading off-course. Sharp, AmigaONE etc. - yep, good work chaps, pat on the back, keep it up. Next!

**Andrew Korn**

## How "Big"?

My first reaction to the announcements at St. Louis was that here was another case of the event not matching up to the "BIG" build up. The announcements may not have lived up to the pre-show hyperbole, but things do appear to be moving, and in the right direction. AmigaONE motherboards were on show, mere months after the project was announced. The link with Sharp is interesting. The Zaurus is not just some "nice idea" product, it is already on sale in Japan.

The development of a PPC AmigaOS4, to include the AmigaDE later, is interesting. Amiga are moving away from running the DE natively and concentrating on hosted environments. The AmigaONE and bPlan machines will need an OS on which to host the DE, and AmigaOS4 is it. 4.0 doesn't look particularly interesting in itself, but the integration of the DE in AmigaOS 4.2 should be when the fun really starts.

It hasn't received much commentary, but the statement that Amiga are to take control of projects like OS4 is significant. Not only should it help to ensure prompt delivery (would we have the BoXeR now if there had been lines for late delivery?) but it may help to stop some of the political infighting.

While things may not be moving as fast as some had hoped, they are definitely moving, and in a good direction. Considering that the previous owner of Amiga only managed to produce a foam rubber mockup, this is real progress.

**Neil Bothwick**



## Piecing together Amiga's Future

On April 1, everyone's view of the Amiga's future changed. Just how much depends on whom you ask - and what they really know. Confused by it all? We've been talking to the people who are shaping the Amiga's future...

**T**alk about the Amiga today and chances are you won't be able to go more than three sentences without mentioning the AmigaOne, Zico, OS5 or the AmigaDE. But, whilst it's one thing to use these words in the right place during polite conversation, it's quite another to know exactly what it is you're talking about. So, how is the Amiga's future likely to pan out? What should you do with your classic system? Should you be saving for new hardware, and what will happen to the Amiga operating system? It's time to unfold the Amiga roadmap again.

Back in January 2000, when Bill McEwen and Fleecy Moss took control, the future of the Amiga was looking better than it had done for a long time. If you want proof, look back a year to issue 8 of *Amiga Active* - in particular, the 2000 St. Louis show report. Within three months of taking over, Amiga had partnered with Tao Group of Reading, UK, released the first Software Development Kit (SDK) for the new platform - albeit one without any of their own content - and were looking in control. The Amiga market was riding high. Relatively speaking, of course.

been no significant updates to the SDK (a Windows version was released at the end of last year, but didn't add anything new over the existing Linux SDK), nor have there been any new partnership announcements from Amiga. At the same time, however, Tao Group - whose intent multimedia platform is being used as the foundation for the forthcoming Amiga Digital Environment (AmigaDE) - were making numerous partnership announcements and looking like the sole driving force behind the Amiga revival.

This year, however, obviously keen to banish for good the April Fools' Day curse that has haunted its past, Amiga saved their announcement of a partnership with Sharp for the Sunday of the 2001 St. Louis show, where they also revealed plans for the continuation of the classic Amiga operating system and confirmed the imminent release of the AmigaOne: news which has given most people at least a few reasons to be cheerful.

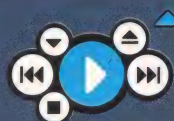
### Part One: The AmigaOne

The AmigaOne was initially announced back in October 2000 at the Alternative Computer Expo in Melbourne, Australia (see AA15, p6) and will be produced by several companies world-wide, including Eyetech's industrial systems division and German manufacturers Escena. It will be available in two flavours - for both A1200 and A4000 systems, with each version being named appropriately. As reported last issue, the AmigaOne boards are now in the prototyping stage, happily confirming both Amiga's and Eyetech's commitment to the production of new Amiga hardware after so many years without so much as a sniff of new silicon.

Based on the G3/G4 PowerPC line of processors (as used in the latest Power Macintosh computers), the AmigaOne will feature one AGP (Accelerated Graphics Port) and six PCI (Peripheral Component Interconnect) slots to accommodate low-cost, mass-produced hardware such as Ethernet, Sound and Graphics cards. It will be able to house up to 512MB of memory (SDRAM type) and come with a custom PCI USB (Universal Serial Bus) card, which will allow you to connect peripherals such as a mouse, keyboard, printer, scanner and so on.



After the 2000 St. Louis show, however, Amiga seemed to take their foot off the gas and drop into a lower gear. Not a great deal has been made public in the last 12 months, which has made it increasingly difficult for developers and users to remain optimistic about the Amiga's future. Though eagerly awaited, there have





Although being produced by several companies, Eyetech have confirmed that the cost of AmigaOne boards to all dealers world-wide will be the same, encouraging healthy price competition and wide availability. The only constraints being placed on dealers are that they will need to buy AmigaOne boards in minimum quantity batches and have at least one person who will be able to give technical support to end users.

*"Amiga has a strategic relationship with certain companies (for instance, Matrox) and will try to get volume discounts for all dealers," Amiga's CTO Fleecy Moss tells Amiga Active. "It is Amiga's policy to only support one card of each type - for instance, the Matrox graphics cards, EMU10K1-based audio cards etc." he continues. "The drivers for these will ship with OS4 products and dealers will be made aware of exactly which cards to stock and fit. This does not mean that third parties cannot create and sell drivers for other cards."*

Now for the part which is still causing the most confusion: linking the AmigaOne boards to classic Amiga systems. The AmigaOne board is a standalone computer. Think of it inside its own ATX form-factor case - you'll be able to plug it in, turn it on, boot into OS4, run classic Amiga applications under emulation (more about the operating system later) and use it as an Amiga in its own right.

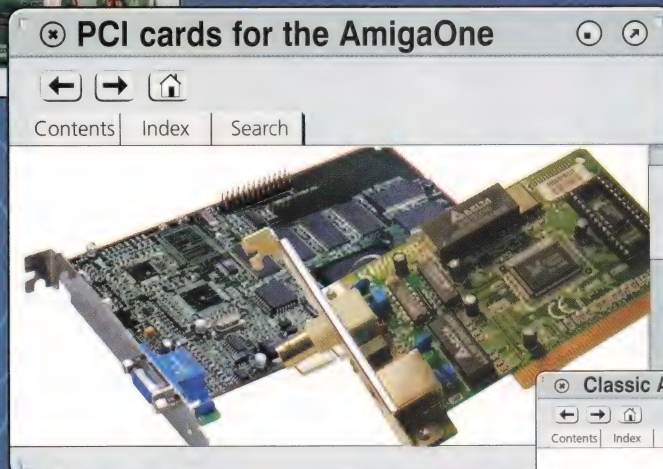


*"The manufacturing consortium will sell bare boards to dealers, for them to add their own SDRAM, I/O and graphics cards, cases, storage etc." stated Eyetech's Managing Director, Alan Redhouse, on the AmigaOne mailing list during the week following the St. Louis show. "We will also make the specification for the CPU slot open, so that other companies can build CPU modules."*

The companies manufacturing the AmigaOne boards will also be producing CPU modules, whilst end users will also have the option of buying second-hand Mac-type ZIF CPU/memory modules to plug in to their AmigaOne boards if they want a cheaper solution - good news all round for those fed up with paying over-the-odds for custom Amiga hardware.

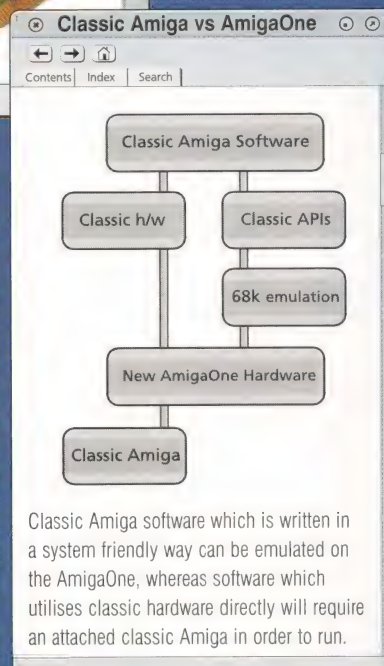
As for the PCI and AGP slots included on the AmigaOne motherboard, however, users will only be able to add a limited number of cards, details of which are yet to be revealed by Amiga Inc. These will, however, include graphics, networking, modem, ISDN, Firewire, SCSI and sound cards, so there should be a good choice of boards initially available and supported from the word go.

Some of the drivers for these cards will be provided with OS4, whilst others will be supplied by third parties. It is to be hoped that these drivers all arrive on time and are written for cards which are widely available, to avoid the current situation that Amiga owners are experiencing with Voodoo3 graphics cards which, although supported by drivers supplied with current PCI solutions (Mediator and G-Rex), are increasingly hard to come by; certainly not what purchasers of PCI boards have been expecting.



But, as Fleecy Moss openly admits, Eyetech have worked a minor miracle with the AmigaOne. Before they jumped on board with the AmigaOne project, Eyetech were working on the Predator line of PCI boards for the Amiga. They used the work they were doing on the Predator Plus to give the AmigaOne cards an unique ability: by plugging the classic Amiga motherboard into the AmigaOne (think of it this way around as opposed to plugging the AmigaOne board into the classic Amiga), the classic system can be utilised by the AmigaOne to give increased backward compatibility.

The reason for this decision is due to Amiga software, some of which is written to 'hit the hardware' directly, rather than go through the classic Amiga operating system's APIs (Application Programmer Interfaces). If a program is written to use



Classic Amiga software which is written in a system friendly way can be emulated on the AmigaOne, whereas software which utilises classic hardware directly will require an attached classic Amiga in order to run.



**"Amiga are sending out a clear signal  
that they are now in control..."**

## Part Two: The AmigaOS

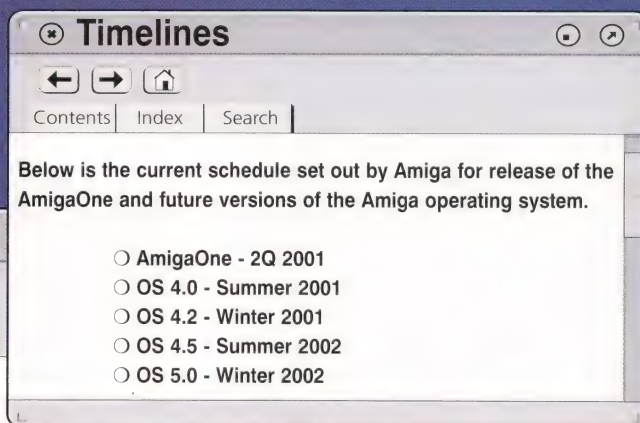
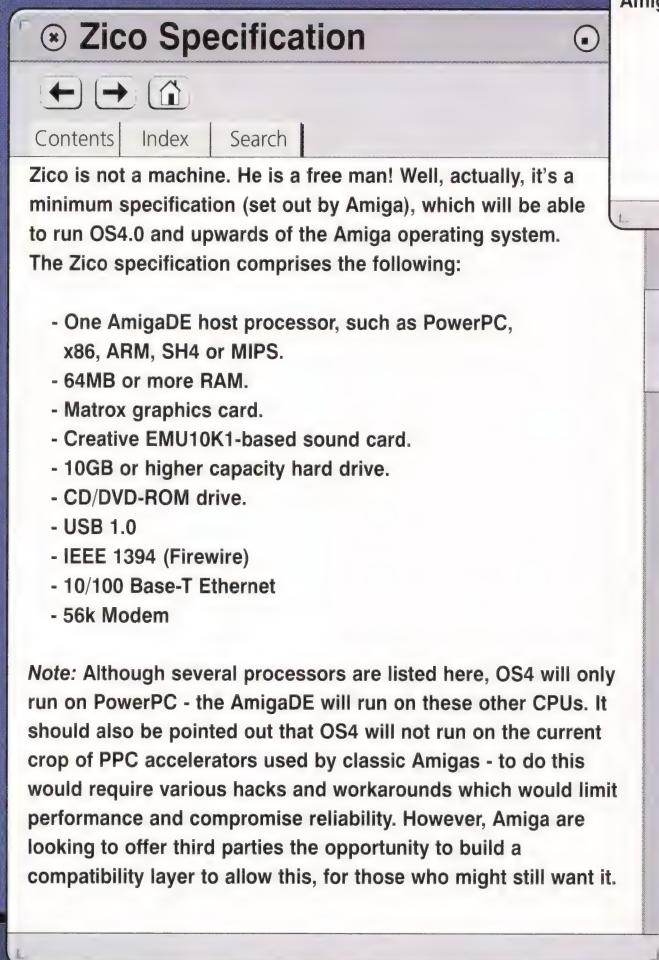
The AmigaOne will run the next revision of the Amiga operating system, OS4, which will be released in stages - OS4.0 being the first, to be followed at approximately six month intervals by 4.2, 4.5 and finally OS5.

AmigaOS4 is being designed to run on a Zico-compliant computer system that uses a PPC processor. "Currently, only one [such system] has been put before Amiga for certification, and that is the Eyetech AmigaOne," explains Fleecy Moss. "Other companies have contacted Amiga about developing similar products and some are modifying their existing products to provide Zico compatibility."

With their plans for OS4, Amiga are sending out a clear signal that they are

now in control of the Amiga operating system (whereas recently, with OS3.5 and 3.9, development had been left largely in the hands of Haage & Partner). Bringing control of the AmigaOS back in-house gives Amiga several advantages. Firstly, they get to upgrade the classic operating system that the Amiga community is used to, with a view to integrating the AmigaDE to create one content environment. Secondly, and perhaps most importantly for Amiga, it gives them some responsibility and focus.

Until now, with Tao Group developing the intent multimedia system (the basis of the AmigaDE), Amiga were seen by many to be wholly dependant on the success of Tao and the relationships the Reading-based company had built up. With OS4, however, Amiga are in control of something. Granted, they will be using external developers on a contract basis to develop the OS (Haage & Partner will work on the PowerPC side and the Picasso96 authors are working with Amiga on a new Retargetable Graphics System, for example), but the direction and featureset of the AmigaOS are both down to Amiga Inc.



The purpose of Amiga's OS4 project is to add new functionality to the Amiga operating system, move the community to new, state-of-the-art hardware and integrate the AmigaDE at the same time: no easy task, which is why it will be achieved - sensibly - in stages.

*"This project will be accomplished via a staged set of releases which allow Amiga Inc. to build from the bottom up, giving developers the maximum increase in performance and ensuring that the users can look forward to regular and better products, rather than having to wait a long and frustrating period of time until something is in their hands." Fleecy Moss told us.*

The first release, OS4.0, will provide the first stepping stone to a fully PowerPC-native Amiga operating system. It is being designed to take full advantage of the Zico-based machines currently being developed, by taking the key elements of the current OS and re-writing them to use PPC hardware. The remaining elements of the operating system will be left as 68k code, and will be executed via a 68k emulator. The upshot of all this should mean that users and developers will get to see



the largest increase in performance from the smallest amount of work, meaning we shouldn't have to wait too long for its release.

### Integrating the DE

AmigaOS 4.2 will build on the foundation of OS4.0 and will see the Amiga Digital Environment being integrated into the OS. The operating system will be made fully retargetable (allowing all programs to operate without access to classic Amiga hardware), and open access to new hardware included in the Zico specification. In addition, more of the 68k code will be translated to PowerPC.

Integrating the AmigaDE into OS4.2 will give users and developers access to PersonalJava - and therefore a whole range of Java applications. "In AmigaOS 4.2, the AmigaDE will appear on the AmigaOS for the first time," Fleecy explains. "At a single stroke, users will be given access to four content domains: Existing content created for OS3.x; New content created for OS4.x; All content created for the AmigaDE and all Java content. Developers, meanwhile, will be able to develop for the AmigaDE or Java markets on a platform they love, or they can stick to the new AmigaOS and take advantage of powerful brand new hardware and software. It's all about choice."

**"At a single stroke, users will be given access to four content domains..."**

Amiga's new scripting language (a la ARexx), SHEEP, is also slated for inclusion with OS4.2. The audio system will be made PowerPC native, and USB2 support (also PPC native) will be included for the first time.

These features should keep everyone happily occupied until OS4.5, when all 68k code will have been converted to PowerPC, resulting in a fully PPC native operating system. All the hardware features of the Zico specification will be made accessible to developers, and a new user environment will give the Amiga operating system a much-needed facelift.

Finally, when talking about the release of OS5, we hear Amiga using a word which hasn't seen the light of day since Jim Collas resigned in 1998: "AmigaOS5

represents a revolution in the development of 'other' operating systems and the evolution of the AmigaOS. It seeks to provide the best way forward for users and developers," enthuses Fleecy Moss.

OS5 is expected to be fully 64-bit, with virtual memory (VM), memory protection (MP) and both Symmetric and Asymmetric modes (stop us if we're losing you). Terms

like "PDP sensory processing system", "Orthogonal Persistence" and "Semantic context" will cause raised eyebrows on the faces of all but the most hardened Amiga technicians - but the explanation of these terms isn't necessary for the time being (besides which, we only have four pages to work with here).

Suffice it to say that, with the announced plans for upgrading the classic Amiga

operating system and the manufacture of AmigaOne boards, the future for Amiga owners is looking a lot brighter than it was six months ago.

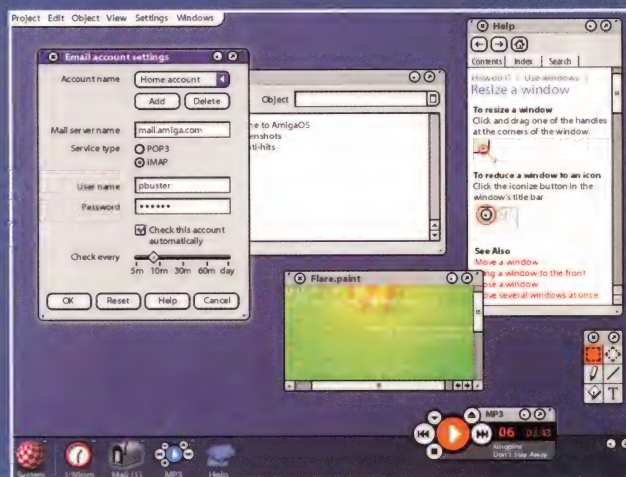
"Amiga will provide two products that can exist separately or work together," concludes Fleecy Moss. "The AmigaDE is a universal content layer that can work on any device, whilst the AmigaOS is a standalone product that will be massively improved to provide workstation and server level capabilities required for next-generation home servers."

"Amiga sees the digital home becoming an increasingly important market. Not only is there a need for storage, security and cataloguing, but there is also a need to serve this content throughout the digital home to every AmigaDE device in the house. Add to that the importance of the connection between the digital home and the outside world, and you have a very compelling argument for the development of a product that can provide these capabilities."

"The AmigaDE cannot provide these facilities. No other OS out there can provide these facilities - not to the high quality that will be required. The AmigaOS, suitably extended, can. It then becomes obvious that if we allowed the DE to run hosted on the AmigaOS, the community would be able to use the AmigaOS as a high-performance desktop and workstation. Given that Amiga controls the AmigaOS, the AmigaDE can be tightly integrated, making it the best host. Everyone will be happy."

We certainly hope so.

A



**Above:** A very early prototype for Amiga OS5's GUI. Do you like it? Let us know!

OS4 Featureset

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- PowerPC-native ExecPPC allowing for execution of PPC, 68k and mixed (PPC+68k) executables.
- PPC 68k emulator, eliminating completely the need for a 68k processor.
- PPC native Virtual Memory - OS4.0 will, for the first time, allow developers to create new applications that take proper advantage of the MMU (Memory Management Unit) capabilities of the PPC to make use of Virtual Memory (VM).
- PPC native graphics system, incorporating AmiRTG (which will provide full access to hardware acceleration features of modern graphics cards), drivers for Voodoo3 and Matrox G450 cards, Ami2D and Ami3D (providing low-level access to 2D and 3D functions) and a full Mesa 3.4 implementation for 3D development.
- Audio system will include AHI integration (for samples and streaming) and CAMD integration for MIDI.
- PPC native filesystem, AmiFFS2 - a brand new implementation of FFS offering much higher performance and stability.
- PPC native TCP/IP stack - high performance networking for multi-player network gaming and content serving.

Need More Info?

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Amiga: [www.amiga.com](http://www.amiga.com)

Eyetechnology: [www.eyetechnology.co.uk](http://www.eyetechnology.co.uk)

AmigaOne mailing list: <http://groups.yahoo.com/group/AmigaOne>



# Enter the G-Rex



Owners of A1200 towers with Blizzard PPC cards now have a choice to make when it comes to PCI solutions!

**T**he G-Rex from DCE is, like the Mediator, a PCI card designed for towered A1200s. Unlike the Mediator, however, you'll need a Blizzard PPC accelerator too, as the G-Rex uses the expansion slot on the BPPC to connect itself to the Amiga. You'll also need a suitable tower to house the card: a V-Tower, Winner Tower, Power Tower or Infinitiv Tower. Fitting the board inside other towers is a possibility, although you'll need knockouts and mountings in the right place in order to install the G-Rex properly.

**"For your money, you'll receive two pieces of hardware."**

For your money, you'll receive two pieces of hardware. The G-Rex itself is an almost square printed circuit board (PCB) of similar dimensions to the Mediator which serves as a

platform for five PCI slots and two types of power connector (to facilitate connection of both AT and ATX power supply units). It also has a picture of a dinosaur etched into it. A nice touch, maybe, but one which doesn't affect the board's performance in any way, as far as we can tell!



Above: Roaaaaar! Nice design, chaps.

The main G-Rex PCB is accompanied by another board, similar in size and shape to the BVisionPPC graphics card. No, this isn't your lucky day, they haven't sent you a BVision by mistake, this is the logic board which joins the G-Rex to the Blizzard PPC. It connects to the same expansion slot on the PPC card as the BVision (meaning if you've got a BVision, it will sadly be made redundant) and has two

sets of pins along its top edge which the G-Rex sits on.

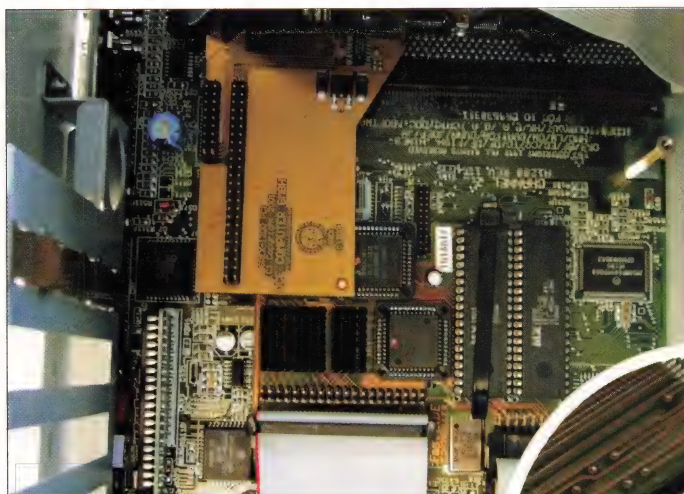
## The ankle bone connects to...

Also provided with the G-Rex are a couple of rubber spacers and the necessary screws for mounting the board inside your tower. The step-by-step installation instructions provided (in both English and German) are relatively easy to follow. First, you connect the logic board to the Blizzard PPC, tethering them securely with a couple of tiny nuts and bolts. Then, having taken your Amiga apart so that you have easy access to the motherboard, you are supposed to mount the two rubber spacers.

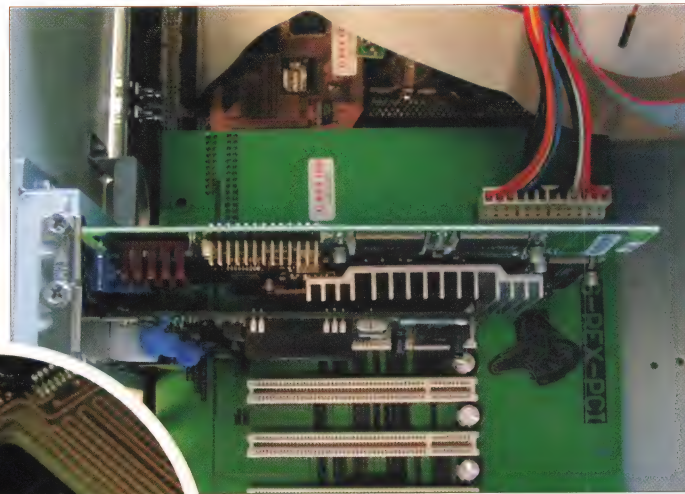
The first spacer goes on top of a surface-mounted chip, and the second goes, well, "*above that chip and to the left a bit*" - it's not entirely clear where from the greyscale digital photograph, so you're better leaving it for a moment. A 25mm metal spacer is also attached to the motherboard in the corner next to the trapdoor connector to serve as a mounting point once the G-Rex is in place.

So, unsure of the location of the second rubber grommit, you plug the Blizzard PPC (with G-Rex logic board attached) into the





**Above:** The G-Rex logic board tangles with a Power Flyer.



**Above:** The G-Rex happily installed, along with two PCI cards.

trapdoor accelerator slot. In our Power Tower, this necessitated the removal of a small PCB which took power to the lights on the front of the tower, exposing the LED header pins. In the installation instructions, your attention is drawn to the fact that the logic board has a small plate on its underside "for protection". It soon becomes clear when you begin to insert the board that the instructions are referring to these LED header pins.

Extreme care is called for when inserting the BPPC: the plate on the logic board grates against the exposed pins as you slide the BPPC into place. If you're not careful, you can easily bend these pins, so proceed with caution! Once fully inserted, the LED header is once again accessible through a cut-out in the logic board, but re-attaching the connector in our Power Tower proved fiddly - we could only just manage to perch the connector back on the tops of the pins before the tiny PCB hit the logic

**Right:** Be careful of those pins!  
Pins, mother, pins!

**"... you should be able to complete the procedure in just a few minutes."**

board and wouldn't go any further. As I write this, however, the lights are still on in our Power Tower, so someone must be at home. All is well.

**Flying in the face of logic**  
Owners of Power Flyers should take heed of an additional warning: the end of the G-Rex's logic board intrudes on the space just above the Amiga motherboard

already taken up by an installed Power Flyer. Installation is still possible, though certainly not recommended - the logic board will have to sit over the Power Flyer, which pushes it away from the Amiga motherboard by several degrees, putting a strain on the connection between it and the PPC card. We managed to complete the installation with our Power Flyer still installed, but we wouldn't recommend other Power Flyer owners go ahead with the installation unless they're willing to suffer the potential consequences.

Next comes the preparation of the G-Rex board, which involves attaching a 25mm plastic spacer in one corner. The G-Rex is then mounted inside the tower, plugging into the two sets of pins on the logic board. Pushing the

cards together firmly, it now becomes obvious where the second rubber spacer should be situated - on the Amiga motherboard underneath that plastic spacer.

With everything now in place, the G-Rex can be secured to the metal spacer previously attached to the motherboard. Power is then fed to the board via two ATX-style connectors in the Power Tower. If you're installing it in an Infnitiv tower, you can connect the original Micronik PSU connector along with an extra 5V lead. This is all clearly documented in the installation instructions, so you should be able to complete the procedure in just a few minutes.

#### Feeding the G-Rex

With the G-Rex tethered into place, you're ready to feed it some PCI cards (we installed an Ethernet card and a Voodoo3 graphics board). Finally, put the tower's case back on, reconnect your system and power up. ▶

## Anatomy of a G-Rex

- 5 PCI slots
- PCI bus clocked at 25-33MHz  
(depending on bus clock of BlizzardPPC)
- 32-bit PCI bus mastering
- 32-bit DMA from/to BPPC
- PCI library stored in Flash ROM
- 1.76GB of linear PCI address space
- PC AT and ATX PSU connectors



► When booting for the first time, you'll need to update the Flash ROM of your Blizzard PPC card using the provided update disk. This procedure should be harmless (it's explained clearly in the documentation) although we should point out that we didn't have to carry out this step as the PPC card we were provided with had already been updated by the thoughtful chaps at Power.

The single network card driver provided with the G-Rex will suit any Ethernet cards using the RTL8029 chipset (the same chipset supported by drivers provided by Elbox for the Mediator PCI busboard), whilst graphics drivers for the Voodoo3, 4, 5, Permedia 2, Virge and Virge/DX are also present. You'll need to know the maximum horizontal refresh rate of your

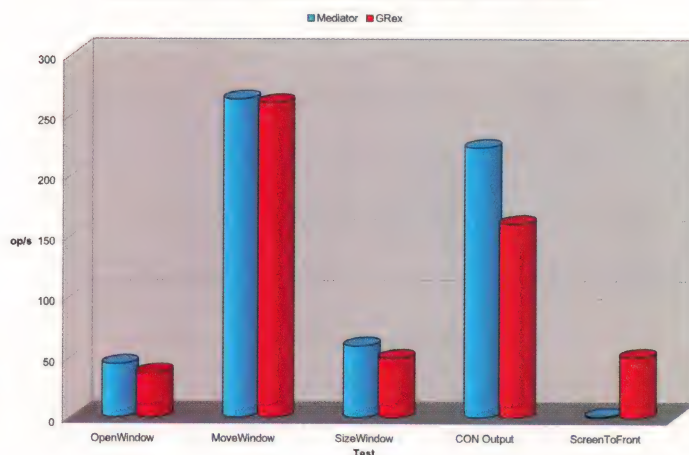
**"...this command appears to be missing from v1.0 of the driver disk."**

Booting up for the first time went without a hitch, and using the second floppy disk to install the necessary Ethernet and graphics card drivers (the latter courtesy of Vision Factory Developments, developers of the CyberGraphX RTG system) also went smoothly, to a point. The only problem here lay with the PCInfo command which the installer tells you it will copy to your C: assign, but doesn't - mainly because this command appears to be missing from v1.0 of the driver disk. Despite several attempts, we were unable to obtain this file from DCE before going to press, so we trust that it does actually exist and that the omission will be rectified as soon as possible. If your driver disk is also missing this file, contact the supplier of your G-Rex.

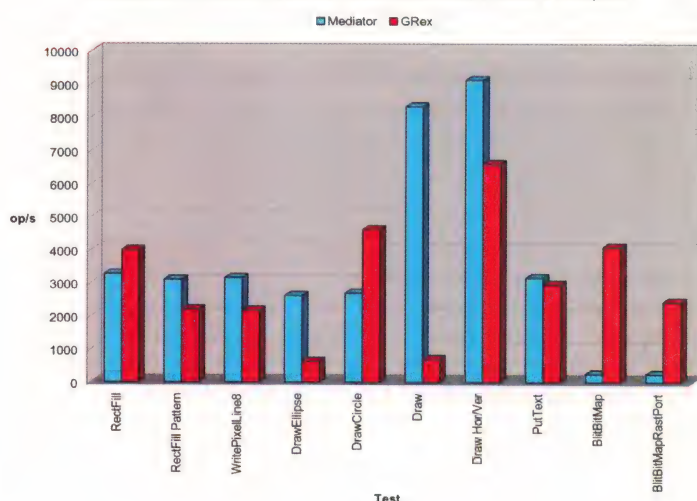
monitor to install the graphics drivers (get out that dusty old manual!) and when the installer has finished, a reboot will see you ready to run CGXMode and set up your screenmodes.

Running the CGXMode program for the first time after installation, however, didn't work for us. We needed to change the BOARD tooltype in the program's icon to "Voodoo3" manually before it would start up - a step that doesn't appear to be documented in the installation manual. After checking through the screenmodes set up by default (and changing some of the higher resolution modes from "Interlaced" - not supported by the Voodoo3 - to "Normal"), rebooting again then allows you to select one of your graphics card screenmodes from

Comparison of Voodoo3 Graphics Performance - P96Speed Intuition Test Results



Comparison of Voodoo3 Graphics Performance Using Picasso's P96Speed



Workbench's Screenmode Preferences program, with one further reboot then bringing your Workbench screen up on your graphics card.

## Performance

So, installation of the G-Rex is relatively painless (unless you have a Power Flyer), but how good is it? Does this PCI solution set the world alight, leaving the Mediator choking on its exhaust fumes, or do the two PCI boards match each other blow for blow?

Donning our technical caps, we put the G-Rex through a gruelling set of tests, then rebuilt our Power Tower substituting the G-Rex for the Mediator to run the exact same benchmarks. Then, just to be sure, we dismantled the tower again and hooked the G-Rex back up to confirm the first set of results, before once again

dismantling and rebuilding the Tower with the Mediator. Well, you've got to be sure, haven't you?

It should also be noted that we used the same accelerator - the BlizzardPPC 603e with 040/25 68k CPU - throughout our tests. Everything about our Power Tower bar the PCI board remained the same, so that neither solution could be accused of stealing a march on the other courtesy of a different (i.e. faster) accelerator.

We used the Picasso96 utility, P96Speed, to judge the performance of our Voodoo3 graphics card in both the G-Rex and Mediator. The graph (above, top) shows mixed results, with both cards showing superior Voodoo3 performance in different areas. Obviously the performance differences are being strongly influenced by the drivers, so it's impossible to read too much into

**Is it a bird? Is it a plane?**

Because Eyetech, who were initially developing their own line of 'Predator' PCI cards, have co-operated with DCE to merge their technologies with the G-Rex, you may find some people using the names G-Rex and PredatorSE interchangeably. For clarity's sake, however, *Amiga Active* would prefer it if the product had just the one name, and chances are our readers would find it a lot less confusing too. Therefore, we've decided to call it the G-Rex. Why? Because that's what is says on the card!





Above: Pick a screenmode, any screenmode.

the figures we've obtained here - Elbox's drivers may be more heavily optimized for certain functions than others, as will probably be the case for Vision Factory's CyberGraphX drivers.

### Welcome, to the real world...

The importance of such benchmarks is, therefore, highly debatable. To properly judge the performance of our Voodoo3 graphics card in either PCI busboard, we'll have to wait for the next update to Haage & Partner's Warp3D package which should include drivers for the Voodoo3. Then we'll be able to run some real-world tests using Warp3D games like Heretic II, Wipeout 2097 and, hopefully, Shogo. Only then will we be able to judge the merits of one system over another - although the performance of either system will still depend to a certain extent on the underlying 2D drivers which 3D drivers have to address.

P96Speed's Intuition tests, meanwhile (see graph, left) show the Mediator edging it over the G-Rex in all but one test: ScreenToFront. Here, the G-Rex whips the Mediator into submission managing to swap screens 50 times in the time it takes for the Mediator to do it just once. So, if hitting RAMiga-M fifty times a second is important to your everyday use of Workbench, you'll clearly want the G-Rex over the Mediator.

Thinly veiled sarcasm aside, however, this test does point to one of the G-Rex's alleged stronger points; namely the fact that it can access its 1.76GB of linear PCI address space without resorting to bank switching.

Theoretically, this allows the G-Rex to dump whole screens worth of data straight to a graphics card in one of its PCI slots in one go, whereas the Mediator, which has to employ the bank-switching technique to work around the restrictions of the Amiga's expansion slot, would have to send the same data in several chunks. It is yet to be seen whether this feature will give the G-Rex outstandingly better performance as far as any real-world applications are concerned, although naturally, if we find this to be the case, we'll be sure to let you know.

One test which we could perform to judge real-world performance more accurately, however, involved transferring files over an Ethernet network (see graph, below). Again, we used the same PCI Ethernet card to compare the performance of networking with both the G-Rex and the Mediator. We connected our Amiga to the network using Power Computing's PowerLan 2.3 software, and transferred over 100MB of files from a PC on the

network to the Amiga and back again, timing each transfer. From the results we obtained, you really couldn't split the two on this score either.

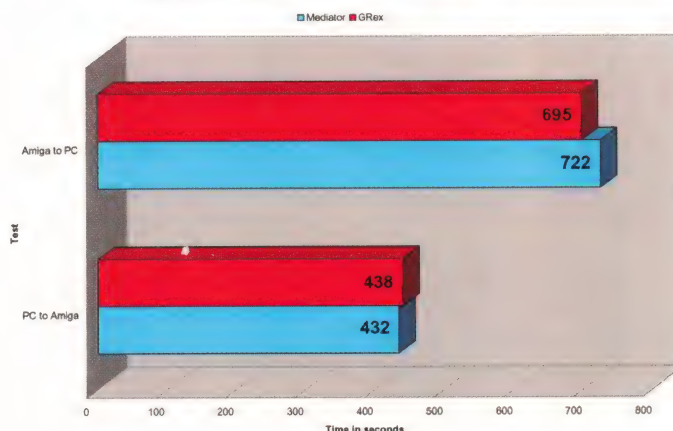
### Six of one?

At the moment, then, only BlizzardPPC owners now have a choice when it comes to selecting a PCI solution - and plenty of those people will more than likely have gone out and bought a Mediator by now anyway. For those who haven't yet decided to invest in a PCI solution but might now be tempted, however, it's still early days: there's no evidence that either solution is categorically better than the other, and until we see the next version of Warp3D and get to try out some 3D games, it's impossible to say what advantages either solution will be able to boast.

The price-points don't help either, with the G-Rex weighing in at £149.95 compared to the Mediator at £139.95. No, unfortunately the only thing you can do if you really want to be sure you're making the right choice is wait another couple of months (which isn't going to help sales of either PCI solution). We're back to that old 'software sells hardware', 'hardware sells software' vicious circle again. At least it could be argued that with one PCI solution, everyone knew where they stood. Still, whilst the G-Rex has muddied the waters, we're yet to see how big a splash it's going to make. Only time - and software - will tell.

David Stroud **A**

Comparison of Ethernet File Transfer Performance with 114MB of files



## 1,2,3...

Having spoken to the G-Rex's manufacturers, DCE, Amiga Active understands that there is no exclusive distributor for the G-Rex, so you've another decision to make - this time between Power Computing, Eyetech and German distributors Vesalia. Flip a three-sided coin, toss a three-sided dice, play 'Paper, Scissors, Stone' with your neighbour to decide - or, if you want to be sensible about it, just choose the company you're happiest dealing with.

## Help!

For owners and potential purchasers of the G-Rex, some kind soul has set up an unofficial mailing list via Yahoogroups. So, to discuss the ins and outs of the G-Rex, point your browser to

<http://groups.yahoo.com/group/G-REX>

## G-REX A1200 PCI

**SYSTEM:** A1200 in a suitable tower with BlizzardPPC card.

**SUMMARY:** A well manufactured, capable PCI solution for Blizzard PPC owners.





# Photogenics 5.0



**I**t's been about a year since we last reviewed Paul Nolan's Photogenics, and after a long wait, this much-travelled graphics package once again graces our Amigas with a new version. Since we last looked, Paul has been rather busy getting Linux and Windows versions of the program out for those poor souls who don't have an Amiga. A timely reminder to the world, perhaps, that there is still innovative software being developed for the Amiga.

**“... there is still innovative software being developed for the Amiga.”**

With a lot of time having to be devoted to the Windows and Linux versions, we haven't seen a lot of development on the Amiga version for a while. With the core code for those versions done,

**What's in a number?**

The long-running Photogenics series enters its fifth season.

however, it's now time for the improvements to the code-base to make their way back to the Amiga.

#### **In brief**

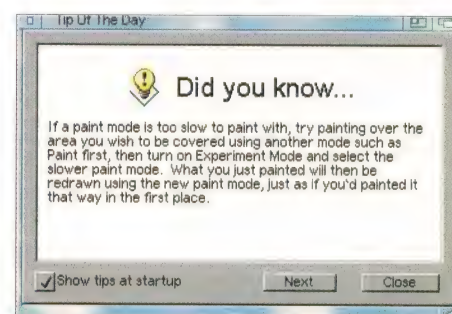
We don't want to go over too much of the ground covered in previous reviews, but here's a quick rundown of

Photogenics' functionality (if you want a more in-depth explanation, please refer to the reviews in issues 1 and 9 of *Amiga Active*). Photogenics is a paint program which builds up images from a stack of 'paint layers'. A layer is effectively a bit-mask that determines how the image beneath is modified. This means you can paint pixels of colour onto an image as with any other paint package, but you can also apply any other kind of affect or fill to the same bit-mask - thus you can paint with a blur effect, for example, as if it were paint.

Photogenics offers all the standard tools such as line, freehand and curves, filled and outlined circles and rectangles, fills, symmetry, text tools and so forth. It also offers a whole set of controls that determine how these marks are applied - natural media tools, colour pickers, etc. - that are accessed through a tabbed GUI palette with drag-and-drop

layout editing. There are a vast range of paint modes from standard colour paint to a wide range of blurs and convolutions, through special effects such as pixelisation or solarisation to photo manipulation tools and an astonishing array of rub-through tools. This wide range of functions is logically and simply laid out using a highly intuitive GUI, and allow both localised and extremely subtle image processing. All of which makes Photogenics an unique and impressive program.

As you can see from the screenshots, there are no major surprises in store for users of



**Above:** All your tip-of-the-day are belong to us.

older versions. No radical changes to the GUI, no obvious changes to the way the programs work. We have to look a little more carefully to see the improvements. The first thing you'll notice is that the new image requester has changed. There are now far more presets, including digital camera formats and paper sizes to choose from. On the other hand, the sliders have gone, so if



you want a non-standard size you'll have to resort to typing it in. Next up, the change introduced in version 4.5 to the index tabs in the multi-page tool panels (whereby they changed when the mouse hovered over the tab) is no longer a default, although the option is still there if you like it. Next obvious place to look, in the paint modes - yep, an extra 10 modes are available. An extra channel-based manipulation, two more blur modes, another pixelization mode, remove noise, another rub, sepia... useful stuff but nothing worth shouting about.

## "...palettes now have drop-down menus..."

### Smoother curves

Digging a little deeper throws up a few more. The filetypes are now accessed more simply from the save requester, and there are more of them. Text boxes and the text tool palette get upgrades. Polygons are anti-aliased. A few of the kinks and quirks have been ironed out. Nice, but nothing special. The Options palette sidebar boasts a new addition, the vignette feature. The palettes now have drop-down menus to allow you to add extra tabbed pages and instances of the various features to your palettes. This is probably the largest single improvement to the program as it makes the whole drag-and-drop organise your own scheme work far better and more flexibly.

There are still things which Photogenics needs, however. The lack of GIF support is a weakness. The Amiga version lacks certain things such as scanner/digicam support (which, granted, are more complex issues for the Amiga than via Window's TWAIN system) but it's doable, and other Amiga paint packages like FXPaint do it well.

It would be nice to see more file options, notably the ability to save DPI in formats that support it. Selection tools and stencils could certainly be streamlined, and there's still no way to pick up and manipulate a brush.

We certainly wouldn't complain if ARexx support and a bezier path tool were added, either.

Normally you might expect a rather bigger change between versions 4.5 and 5 than between version 4.2 and 4.5 of a program, but here that isn't really the case. This version seems a little unexciting because 4.5 had a lot of the improvements meant for 5 anyway, but in no small part the really big change from version 4.x to version 5 is that version 5 is the multi-platform one.

At this point you might be expecting me to say something about it being not worth it if you already own version 4.5, but given that the upgrade is free, I'm not - rush out and download it now. If

you'd like to have a copy of Photogenics that runs on a different operating system to go with that, you'll find that as a registered user of the Amiga version you get a discount for crossgrades. All very nice.

### Good, better...

If, on the other hand, you aren't already an owner of version 4.x, there's a treat in store for you. This update may just be more polish, but it's polish supplied to a superb piece of software. The only reason there's no award stamped on this review is that this version doesn't really merit another award on top of the *Amiga Active Gold Award* it already has. Photogenics 5.0 is an excellent piece of software.

Andrew Korn **A**

## Photogenics 5.0

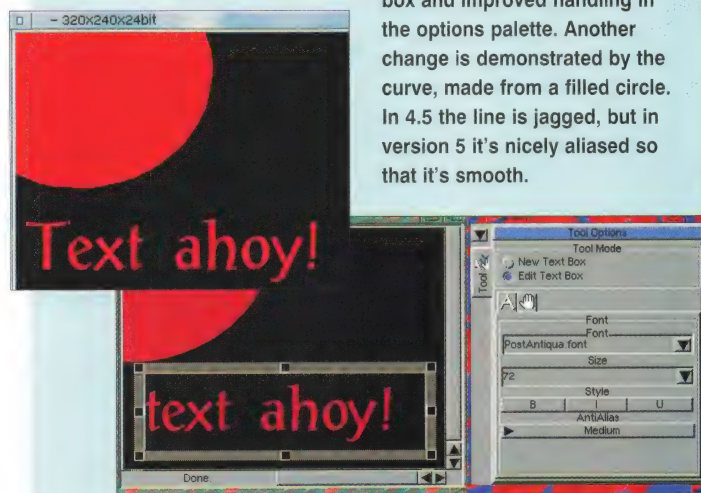
**SYSTEM:** 68030 or better, 8MB or more RAM, graphics card recommended.

**SUMMARY:** Nothing earth-shatteringly new in version 5, but it's another improvement to an already excellent package.

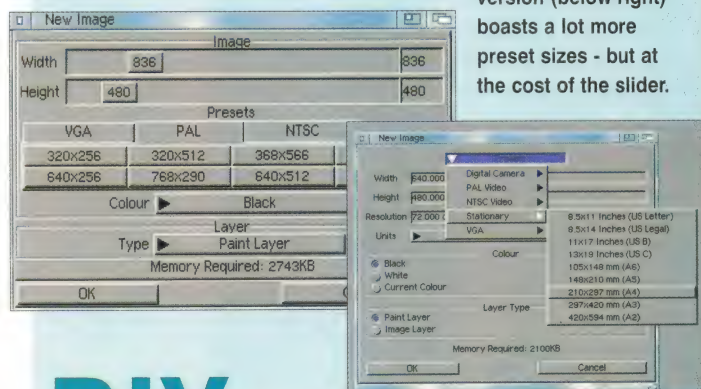


## Spot the difference

Left, Photogenics 4.5; Right, Photogenics 5. Note the new style text box and improved handling in the options palette. Another change is demonstrated by the curve, made from a filled circle. In 4.5 the line is jagged, but in version 5 it's nicely aliased so that it's smooth.

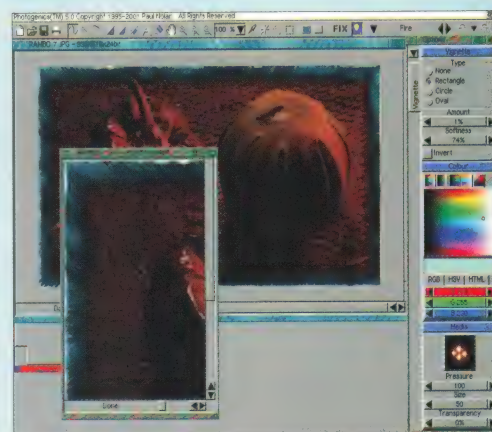


Here we see the new image panel from Photogenics 4.5. The new version (below right) boasts a lot more preset sizes - but at the cost of the slider.



## DIY Options

The image below demonstrates the brilliance of Photogenics' DIY palette system. The frame around the image has been created by applying several different media in several different colours to the edge of the picture. By using the vignette tool it is possible to limit how far into the image each type of mark can go. Rather than switching palettes, the easiest way to do this was to make a custom palette. Just tear off the Vignette tool, add a colour picker and a media selector from the pull-down menu at the top, et voila! All the tools you require for the task, available in one easily accessible place - ideal.





# Handspring

## Visor Edge

Actually on the edge, or just quite close?  
 We sidle up to take a closer look...



**B**ack in issue 14 we looked at the Handspring Visor, a PalmOS-based PDA designed by the same team that built the original Palm Pilot. The idea was to take that popular format and make it even better, adding all the features that at the time were too expensive and too power-hungry to put into the Pilot.

The Visor was a hit, both here and Stateside, but had a few problems such as a slightly rough and bulky plastic casing and the

team have turned their attentions to building a thinner, lighter mono device, essentially as their spin on a better version of the Palm V - they've called it the Visor Edge.

The first thing that strikes you with the Edge is that it oozes class. Technology aside, it looks gorgeous. Handspring has caught the same design bug as Apple, building hardware that is fashionable as well as technically impressive.

### Under the bonnet

The Visor Edge measures just 11.9x7.9x1.1cm and weighs in at 135g - lighter than most tiny mobile phones. It has a 33MHz Motorola Dragonball VZ processor, a digression from the direct use of a Motorola 68K chip, but very similar nonetheless. The shift in chips has made it by far the fastest PalmOS device.

It has 8MB RAM, runs Palm OS 3.5 and features a new variation on the Springboard expansion slot. Called the 'Edge Connector', the enhanced expansion port is revealed by removing the screen cover, and can in theory accept a range of expansion devices. Included is a Springboard adapter, a blue translucent plastic backpack that allows the Edge to accept all existing Springboard modules.

Otherwise the Edge resembles pretty much any other palmtop device. The base of the unit has four hotkeys for launching your most popular applications and an up-down key for scrolling through

data and pages. A metal stylus is docked in a recessed slot to the right hand side of the screen - a welcome change from the cheap and nasty plastic stick provided with the original Visor.

Software-wise, the Visor boasts the usual array of PalmOS applications, everything from a mail reader to a calculator. Using an Amiga sync. client such as Spitfire 2, you can replicate most of these on your Amiga's desktop, while using third-party applications such as Yam for e-mail, which can then be synch'ed between application and Palm thanks to some well-written ARExx scripts.

Unlike the last Visor, the Edge uses an internal rechargeable power cell, in keeping with most palm-size devices today. This is great, as it means you no longer need to worry about locating another pair of AAA batteries in the middle of the night. It also means you can run the device straight off the mains - a real boost when you are using it for prolonged periods - especially with the backlight turned on.

### Edge vs Palm V

Unlike the original Visor, the Edge does have a direct rival in the form of Palm's own Palm V device. Both share many physical characteristics, and despite the fact that it wasn't designed for it, various ingenious hardware manufacturers have found ways to use the sync socket on the V to attach everything from GPS

**"The first thing that strikes you with the Edge is that it oozes class."**

inconvenience of still using disposable batteries.

After experimenting with adding a colour screen to the plastic device, the Handspring



modules to modems and digital cameras. The Edge not only matches this capability point for point, but goes even further. The Springboard expansion bus is a far more versatile option than trying to retrofit stuff to the sync socket, and has already spawned an array of modules, including game cartridges.

Then there's the issue of build quality. Despite its sleek lines, the Palm V still feels tacky and flimsy; a point proven by just how easy it is to break one. The Edge, like its bulky plastic predecessor, is rock solid. It's all-metal, yet it doesn't weigh a tonne and it can survive a roughhousing.



Again, as with the last version, our only quibble with the Edge is that it does not use the latest version of PalmOS (we are currently on 4.0, yet the Visor uses 3.5) and is not flash upgradeable. This OS revision disparity will not cause a major problem, but you may encounter one or two apps that need it.

Chris Green **A**

## Visor Edge

**SYSTEM:** Any Amiga, serial port, serial cradle, Amiga-to-Palm synchronisation software (e.g. Spitfire 2 - see AA12).

**SUMMARY:** Handspring's original punt at building the better Palm was a great success, despite its flaws. The thinner, lighter, better looking and more expandable Visor Edge corrects most of those flaws.



# Handspring Visor Add-ons

So, you're interested in the Visor, and in particular the fact that you can expand the hell out of it thanks to the Springboard slot - but just what can you get? Alas, the UK is still lagging behind the US in terms of what's available, but more and more add-ons are appearing every day. We've rounded up some of the 'must-have' bits and pieces to make the most of a Visor on the move and at home.

## 56k Modem

- £99
- Xircom
- [www.xircom.com](http://www.xircom.com)

A high-speed 56k modem for your Visor that fits in the Springboard expansion slot. Use your Visor handheld to access your e-mail, browse the Web, send or receive faxes, exchange files with a network, and synchronize your data when you're on the road or away from your desk.

All the software you need to use it automatically installs as soon as you insert the modem. Connection to a landline is via a US-style RJ-11 connector. A US-to-UK adapter is provided.

The modem is very power-hungry, so it has its own battery pack to avoid draining the Visor itself. What looks like a custom battery is actually three AAA batteries in a case that then clips onto the modem.

## GSM Interface

- £79
- Xircom
- [www.xircom.com](http://www.xircom.com)

If you use a phone without a built-in Infrared modem, such as the popular 3, 5 and 6 series Nokia phones, you'll need this.

This Springboard module gives you the missing GSM modem, while a cable attaches it to your mobile phone for the necessary connection to the outside world. This approach is far more reliable than an infrared link, as you do not have to perform the precision balancing act of lining up phone and PDA in perfect line of sight.

Included software allows you to send SMS messages, surf the web using an upgraded web browser and compose and send email using a new integrated mail client (the built-in Visor mail client only allows you to sync outgoing mail back to your computer for sending).

## Back-up Module

- £34.99
- Widget
- [www.widget.co.uk](http://www.widget.co.uk)

The Backup Module lets you back up your entire Handspring Visor with one touch. The module can then be removed and stored separately from your handheld. Users who don't Sync with a computer regularly will need this to safeguard against losing data.

If you lose the data in your handheld (due to battery failure, etc.), you can easily restore the backup copy stored in the Backup Module by inserting it and clicking a button - the rest is done automatically.

## GoType Keyboard

- £69.99
- Widget
- [www.widget.co.uk](http://www.widget.co.uk)

Despite its size, many people already use Palm-based devices instead of laptops on the move, and so a keyboard is a must.

The GoType is a one-piece unit measuring 10"x4"x1.5". The Visor docks on the back of the keyboard and also supplies power to it. On PC's and Macs, the keyboard can also be used as a USB sync cradle. Sadly, no interface is available for us Amiga owners.



The keyboard includes built-in software to patch existing PalmOS applications and allows you to access menu commands and shortcuts. Six function keys along the top of the unit can be customised to provide one-touch access to commonly used functions and applications. You also get a CD with a thesaurus and word processor, which are essential, as the memo pad isn't really suitable for long typing.

## 8MB RAM expansion

- £64.99
- Widget
- [www.widget.co.uk](http://www.widget.co.uk)

The 8MB Flash Module lets you store your applications and back up your data when you run short on internal memory (though you will struggle to use up the on-board 8MB as it is). It comes with a built-in File Mover application that lets you copy, move and delete applications on both the module and the handheld. You can even back up and restore individual data files using the same tool.

Developers can also use the 8MB Flash Module to prototype and test applications designed for Springboard modules.



# NextGen Watch

This month we take a look at Ideas2Reality, a Coventry-based computer company with big plans for the future.

**T**he AmigaOne and bPlan Pegasos are not the only hardware designs that the last few years' confusion in the Amiga industry have brought forth. The AmigaOne is firmly aimed at the current user, while the Pegasos is designed with more than an eye on the big box end of the old Amiga market.

But a UK company you may not have heard of before has their sights set on the market that made the Amiga. We talked to Bernard Giltrap of Ideas2Reality about the forthcoming RealityStation, perhaps the closest thing in market terms to the late great Amiga 500.

**Amiga Active:** Can you tell us a little about Ideas2Reality as a company? Where do you come from, what have you been doing up to now and what are your links with the Amiga?

**Bernard Giltrap:** Ideas2Reality are a computer consultancy based in Coventry, supporting SME's (small to medium sized enterprises). We currently support the MS Windows platform, but are in the process of moving over to \*nix based solutions. We have continued to supply

Amiga support when requested over the last two years and presently still use some Amiga applications for graphics work. We also provide a recycled Amiga service which we tailor to required specifications.

**AA:** How did the RealityStation project begin?

**BG:** It started out as a possible solution to the general unhappiness I (and others) felt at the continuing dominance in the marketplace of the PC clone. Considering the progress we should have seen, there have been no tangible benefits to customers from the constant upgrade cycle. I was getting a little tired of continual OS problems reducing my productivity.

**AA:** What can you tell us about the RealityStation's specs and design concept?

**BG:** We have a range of models; the first one will be an Athlon based system. Following

models will allow a choice of CPU. Styling will make it suitable to go anywhere from a desk to your hi-fi stack. Coventry University are involved in the case design, whilst we deal with the specifics: defining hardware requirements, locating suitable technology partners and so on. A lot of work has to go into the prototype: from creating CAD models to laser joining, and prototyping of parts. The prototype then has to be modified to allow for mass production.

We looked at the processor technology available and found that a lot more could be done with x86 than we see in the clone market. We also discovered that it could be brought to market in a shorter timeframe than other solutions. Whilst other product launches will allow for "alternative" processor solutions, we would like to see a lot more choice than is currently available. Nate Downes and Ian Stedman are working on these solutions, and a lot of what is being done will take computer technology in a radically different direction.

## The RealityStation

Quite a few of the details are still covered by NDAs (Non-Disclosure Agreements), but here are the main points:

- ❑ AMD Athlon processor (other possibilities later on)
- ❑ 4 USB ports
- ❑ 2 Firewire ports
- ❑ TV output
- ❑ AGP OpenGL compatible graphics card
- ❑ OpenAL compatible sound card

This is the current design for the RealityStation casework. Other images on this page represent earlier stages in the design concept.



**ideas2reality**  
realitystation





Above: Concept 2

**AA:** What Operating Systems will it run initially? And which do you intend on having running on the device eventually?

**BG:** Due to the design of the architecture and the construction of the machine, QNX RTP will be best placed to maximise the machine's abilities (some unique features are only technically achievable with QNX).

We will be releasing full APIs and documentation to allow third parties to run their OS on the system. We'll be working to get MorphOS as a secondary OS option.

**AA:** Do you see the RealityStation as filling an empty niche between the games console and the home computer?

How do you intend on showing people the value of returning to that niche in the market given that it has essentially been abandoned since the Amiga waned in popularity?

**BG:** We feel that there is a place for an easy to use hobbyists machine at a good price point that is tailored to that use, rather than the common PC clone which is still overly complicated for many situations.

**AA:** Does the recent failure of 3Com's Audrey product worry you at all?

**BG:** 3Com pulled the plug in spite of decent sales, and looking at the tough competition in a market they had little to do with before, has second thoughts. Now it looks like they've gone back to the 'safer' territory they are already familiar with. This is quite common with larger companies: Sony's "delay" of their BEIA based system, for instance.

But, no, the withdrawal from a different marketplace of an unrelated product really doesn't worry us. It's business as usual; we

have our own targets, and our own goals. The QNX connection is coincidental; for every Audrey pulled there are 100 financial successes, after all...

**AA:** Do you intend on getting certification from Amiga to make it an official AmigaDE system?

**BG:** It is possible to support the AmigaDE, but our first priority is to have our machines meet our specifications and have a design we can easily take forward. Right now, this means working with QNX and getting a good feeling of match and integration. Later, it might be possible to host Amiga stuff anyway, so we don't want to get side-tracked by the Zico specification or work on too many fronts to be able to support them all adequately. Of course, this could change when we get further along.

**AA:** What do you see as the principle strengths and weaknesses of these various operating systems in relation to the markets and the type of product you are approaching?

**BG:** The system derives much of its strength from taking advantage of QNX's qnet system combined with the D.A.N architecture. This allows the system to off load work from the main processor.

We had access to all these like-minded developers with necessary skills to do something new in hardware without closing that hardware off for possible use elsewhere. QNX's participation provided an OS that could take advantage of modern architecture. Standards support is a big part of the QNX credo, which really simplifies hardware design,

## "We intend to have machines available by Christmas."

so legacy issues can be bypassed entirely or more easily handled if desired. Design then becomes more a question of integrating standards where it makes sense, and innovating where that seems like the way to go, without creating additional compatibility problems. This makes intelligent, multi-generational design a lot easier.

We will also be more open with our user base - slowing the upgrade cycle will give users and developers a chance to maximise the power of their chosen platform.

**AA:** Can you give us an estimated price point?

**BG:** \$400 for the entry-level machine. We intend to have machines available by Christmas.



Above: Concept 3

**AA:** Will the RealityStation be available through the high street or would you expect it to sell more through tied-in channels, such as Digital TV providers offering it as a "super set-top box"?

**BG:** We are working on our own distribution, which will see the machines widely available.

**AA:** Can you talk a little about your participation in the Phoenix Consortium, and how it has helped in the RealityStation's development?

**BG:** It has allowed us to progress the machine much further than if we had developed it on our own. It has also allowed us to work together with other developers to combine strengths for a better final solution.

As the Phoenix organization emerged from the Gatemiga era underground, Ideas2Reality saw opportunities to get involved in promising new endeavours. QNX had a sustainable business plan that made it easy for third parties to speculate on doing something significant and have long-term viability. It felt like the success of QNX would not be in question, which made one less thing to worry about. And in Phoenix, there were lots of developers around that were interested in what we were interested in, coming from an Amiga background in computing experiences.

**AA:** Do you have any plans for a RealityStation2 or for other systems targetting different niches?

**BG:** Our priority is to ensure a smooth launch of our first products, which will form part of a range of machines that are complimentary. **A**

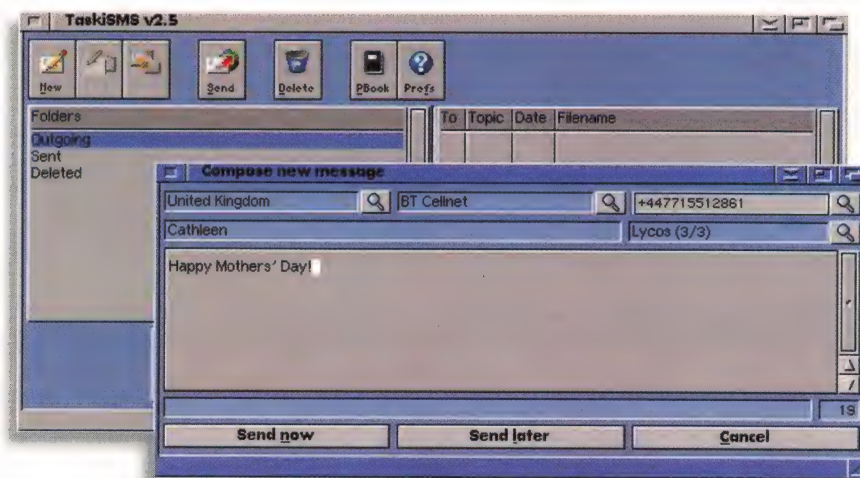
## Want to know more?

There's not much there now, but keep an eye on both [www.ideas2reality.co.uk](http://www.ideas2reality.co.uk) and [www.realitystation.co.uk](http://www.realitystation.co.uk). We'd like to pass on our thanks to greenboy from Phoenix ([www.phinixi.com](http://www.phinixi.com)), Ian Stedman & Nate Downes (who is developing the Eddas multimedia chipset) all of whom helped Bernard compile the answers to our questions.



# Active Shareware

Another dip into the pool that is the Amiga shareware scene.



## Stick it in yer ear!

According to the Hitch Hikers' Guide to the Galaxy, "The Babel fish is small, yellow and leech-like, and is probably the oddest thing in the Universe." In a bizarrely improbable coincidence, BabelFish is also the name AltaVista chose for its web-based automatic translation service. This can be found at <http://babelfish.altavista.com> and provides a form where you enter a word or a paragraph or two of text for the site's virtual Babel fish to digest and excrete in the language of your choosing. The site supports English to French, German, Italian, Spanish, Portuguese, Japanese and Korean (but not Vogon, alas) and vice versa.

Now this is all very well, but it's a bit of pain to have to load

up your browser, surf to the necessary page, and fill in the form, just when you have a simple phrase you want to translate. This is where a neat ARExx script from Michael Trebilcock comes in handy ([comm/irc/Babelfish.lha](http://comm/irc/Babelfish.lha)). This

**"probably the oddest thing in the universe..."**

script, designed to be launched from AmiIRC but perfectly usable from a shell or anywhere else, simulates posting the form on the BabelFish web site, and uses ARExx's string processing ability to extract the resulting translated text. The upshot of all this is that you have an automatic translation service to hand at all times which, with a bit of work, can be integrated into any application that supports the running of ARExx scripts.

## Get the message?

People are strange. Apparently, the fastest-growing messaging medium is SMS - the short text messages that you can send and receive with a mobile phone. If you've ever tried sending one, then you'll know that entering alphanumeric characters on a numeric keypad is an exercise in frustration - and those silly keyboards you can get for some phones are more fashion accessories than practical devices. So, what's the alternative? Using your Amiga, of course!

TaskiSMS (Aminet: [comm/tcp/TaskiSMS.lha](http://comm/tcp/TaskiSMS.lha)) is one of several solutions for entering and sending SMS messages from your Amiga and is one of the most refined. It provides a MUI-based interface much like an e-mail package and is supplied with a built-in list of the various Internet SMS portals dotted

around the globe. You enter a phone number and TaskiSMS works out which phone network the callee belongs to and which SMS server supports that network, and hence which one to use to deliver your message. You just need to enter your message, hit send, and you're

**"...as complete as it needs to be."**

done. Like a mail client, TaskiSMS maintains folders of outgoing, sent and deleted messages and naturally has an address book facility.

TaskiSMS is shareware. Registration costs \$10, and payment online is available via RegNet. The unregistered version will not allow you to create additional message folders, has an annoying



## Amazing 3D?

Some games just don't work when you add an extra dimension to them. Pacman, for instance, doesn't make the transition well from flatland to 3D simply because a first-person perspective



**“...the inspiration for much heated debate in the Amiga world.”**

## MUI on speed

Stefan Stuntz's Magic User Interface (MUI) has been the inspiration for much heated debate in the Amiga world. Some say it is the best graphical interface toolkit in the known world; others say it is slow, unstable and bloated.

Whichever side of the fence you pitch your tent, you cannot deny that MUI has allowed Amiga programmers to create same great software over the years. Take a look at Vapor's catalogue, for instance. Would any of this been possible without MUI? This fact alone makes it all the more infuriating that MUI hasn't seen an update in almost four years.

From a programmer's point of view, MUI lets you build sophisticated interfaces with relative ease - when compared to other GUI toolkits on the Amiga, at least. But compared to what's on

“About” requester on program start-up and limits message size to around 130 characters. The full version supports longer messages: it automatically sends long texts as 160 character chunks.

If you are a serious user of SMS, then TaskiSMS is a godsend. Not only is using a computer keyboard much quicker and much less RSI-inducing than using a mobile phone proper, the ability to cut-and-paste text into messages - e-mail addresses, phone numbers, stock quotes retrieved from the web and so on - makes it much more useful. Functionally, TaskiSMS is damn near as complete as it needs to be, although one useful addition would be the ability to integrate it with other comms software on your computer - YAM, Contact Manager or Thor, for example.

doesn't let you see where all the ghosts and power pills are. Besides which, the game doesn't gain anything from the dimensional jump. Similarly, the classic puzzler, Sokoban, isn't suited to 3D either and for the same reason. But that hasn't stopped somebody from going ahead and producing a 3D version all the same.

GLsokoban (game/think/GLsokoban.lha on Aminet) requires WarpOS and Warp3D and is, not surprisingly, another version of the old push-the-diamonds-around-the-maze game. The authors have got around the lack of a world overview by rendering the game's map - marking the diamonds and the target squares - on the wall in front of your starting position. Ingenious!

Still, when you look at GLsokoban, you have to ask yourself, “Why?” The game was fun, fiendish and addictive as it was. A classic. Why spoil it? In 3D, it is frustratingly slow. Luckily, the authors supplied only one level (which is trivially easy) so hopefully no-one will bother to figure out the format for the map file to make any more. Are people really this desperate for stuff to run on their 3D hardware? Please, tell us it isn't so.

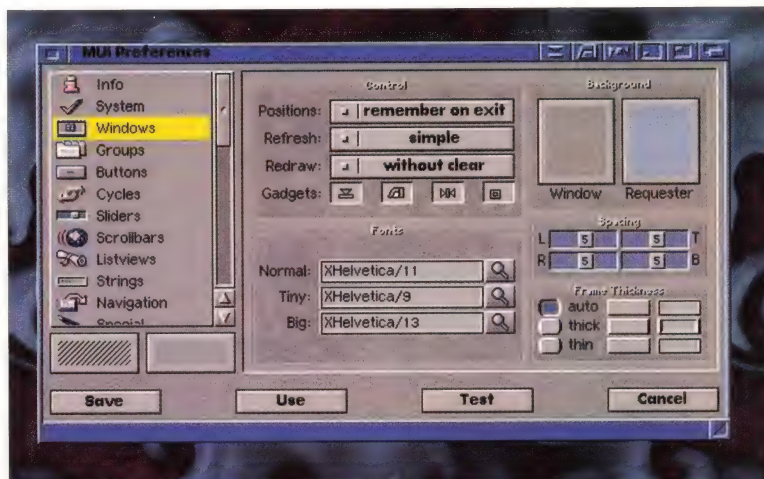
offer on other platforms, it is looking sorely dated. So, why has Stefan Stuntz not done any publicly visible work on it for years? How much better would MUI be today if it had been actively developed instead of being left to go stale?

Just as end-users need applications that are supported, programmers need tools and libraries that are supported too. This is why something as crucial as a graphical interface library should really be developed in the open source arena. The programmer can then have confidence that the library he depends on will at least be maintained for the lifetime of his project. The only

reason why people still develop with MUI today is that the alternatives aren't as enticing.

Anyway, if you're bemoaning the lack of development on MUI, perhaps this patch on Aminet will be of interest to you (dev/mui/muimaster020.lha). It modifies the core MUI library with hand-optimizations for the 68020 processors and above. Just don't expect a huge improvement in speed - in most cases, the differences will be imperceptible - but in complex GUIs you do notice faster redrawing and resizing of windows. Yes, we are Amiga users. We take what little scraps we are thrown gratefully.

**Richard Drummond** A





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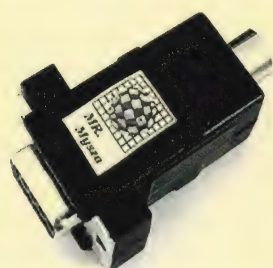
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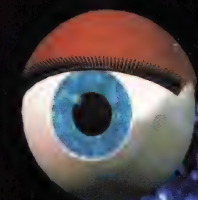
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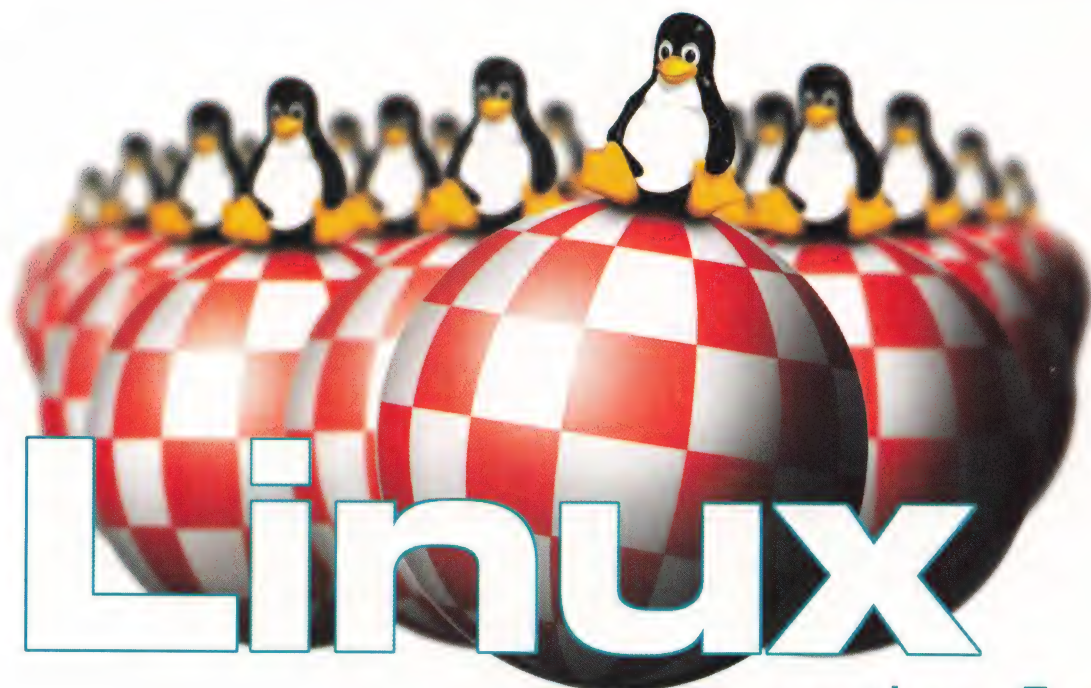
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## on the **Amiga**

Getting your Linux system online and  
some pointers on where to go from here...

part 3

If you have been following our series on installing and using Linux on an Amiga, then you'll have realized that things haven't gone entirely to plan. The idea was to present a basic version of Debian's Linux distribution for 68k and PPC machines - split over several coverdiscs - which you could install from and get a Linux system up and running. Due to various problems in mastering the discs, however, this hasn't been possible. While you could do a base Debian install from AACD17, none of AACD17, 18 or 19 could be easily used to install additional software and so get a useful system. We apologize for this and, hopefully, we will put things right this month and tie up some loose ends.

**"It is possible to install a functional Debian system on your Amiga..."**

### Getting it to work

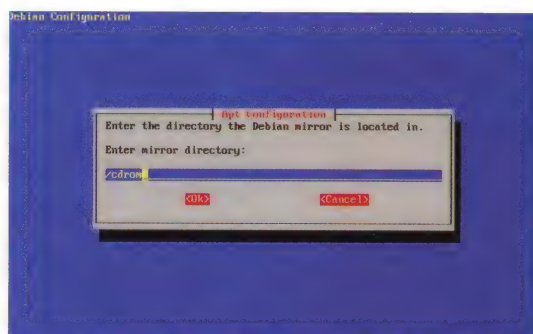
It is possible to install a functional Debian system on your Amiga with the CDs we have provided, but it requires a bit of kludging. Here's how to do it.

Do the base install as described in issue 17 with the coverdisc from that issue. When done, reboot your system and remove the CD from the drive. Boot Linux from the base system you've just installed on your hard drive and go through the system configuration as we discussed in issue 18. This time, because you don't have a CD in your drive, you'll be asked to select a source for installing packages. At this point, stop and hit ALT-F2 to switch to the second console. Log in as 'root'

here, giving the password that you have just set up. Now put AACD18 in the drive, mount it with the command 'mount /cdrom' and switch back to the config screen with ALT-F1.

Choose 'filesystem' from the dialog, say 'No' to the question 'Use non-US software?', 'Yes' to 'Use non-free software?', 'Yes' to 'Use contrib software?' and then enter the filepath '/cdrom' in the file requester. Don't add any further apt sources. Then choose the 'Advanced' method of installing packages and, hopefully, 'dselect' will be launched, which will let you install the packages from the CD. See issue 18 for more details on this.

To install the packages from AACD19, the procedure is similar. When your system has finished installing, unpacking and configuring the software from AACD18, you'll be welcomed to your new Debian system and asked to log in. Log in as 'root', unmount the CD with 'umount /cdrom', eject the CD from the drive and put in AACD19. Mount that with 'mount /cdrom' and restart



**Above:** Follow our instructions and get your Debian installation working at last. (Fingers crossed!)



dselect by entering 'dselect'. Choose 'Update' then 'Select' from the menu and mark the packages you want to add. The packages that you have already installed will be listed as 'Obsolete', but don't worry about that - it's just because APT no longer has a source for them. When you're done, go back to the menu and hit 'Install' and your new packages will be installed. Follow the same procedure for AACD20.

Things may get a bit tricky with unmet dependencies split between the different CDs, but remember that you can hold packages in dselect by pressing '=' and that you can force dselect to accept unmet dependencies by exiting the selection screen with 'Q' instead of 'Return'. Also be aware that you can manually install packages with the dpkg tool. For example:

```
dpkg -install
/cdrom/dists/stable/main/binary-m68k/this-
package_1.0-1.deb
```

Another solution, if you have enough disk space, would be to copy the package trees from each CD to a local directory on your Linux partition and install from there. For example, mount AACD18, then

```
mkdir /usr/local/aacd18
mount /cdrom
cp -a /cdrom/* /usr/local/aacd18/
umount /cdrom
```

Repeat this procedure for AACD19 and 20, copying AACD19 to /usr/local/aacd19 and AACD20 to /usr/local/aacd20. Now, reconfigure apt by running 'apt-setup'. Add each directory you have created as a filesystem apt source and update your machines list of packages with dselect.

As you can see, the problems with the CDs have forced us to take a rather convoluted path to installing the software. There are easier methods, of course. You can obtain a full official Debian-m68 or PPC CD, or you can download the packages you need from the web. We'll address getting your Debian system online next.

**"If you can do it within AmigaOS, then you can do it in Linux."**

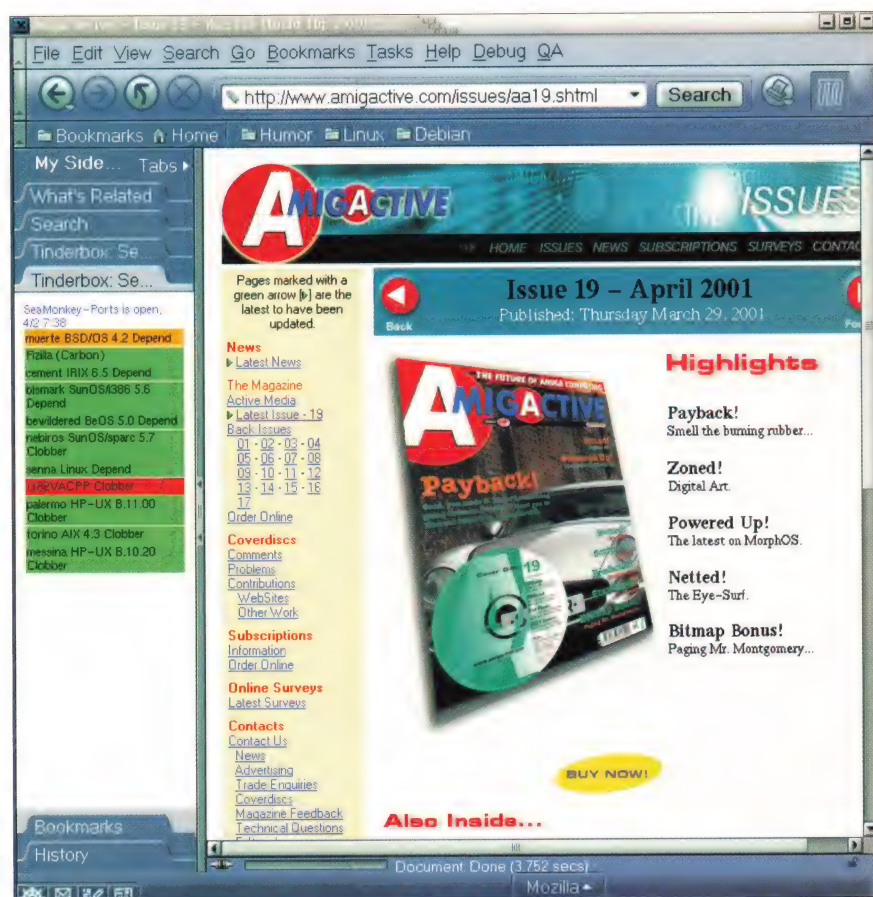
### Getting online

Configuring your Linux system to access the Internet via a dialup connection is fairly straightforward. If you can do it within AmigaOS, then you can do it in Linux.

Make sure you are logged in as 'root' and issue the command 'pppconfig'. This will launch a dialog-based configuration program. Select 'Create a connection' to begin. First you will have to enter a name for the connection you're are setting up. If you just have one ISP, then leave the default name 'provider'; if you have more, then you might want to use the name of the ISP. Then you'll be led through a series of typical dialup

questions: do you want static or dynamic IP addressing, do you want to use PAP, CHAP or a login script, etc. Answer these question exactly as you would for your Amiga, and refer to any information your ISP supplied if you get stuck. When it comes to selecting which serial port, remember that your Amiga's built-in serial port should be '/dev/ttyS0'. If you have an add-on serial card, it may be possible to use it under Linux, but that is beyond the scope of this article. See the web resources boxout at the end of this article.

When you're done configuring your connection, you'll reach another menu. Before selecting 'Finished' to save your settings, select 'Advanced options', then 'Add user'. Here, enter the names of any user accounts that you want to give permission to dial up your ISP. Then hit 'Previous' and 'Finished'.

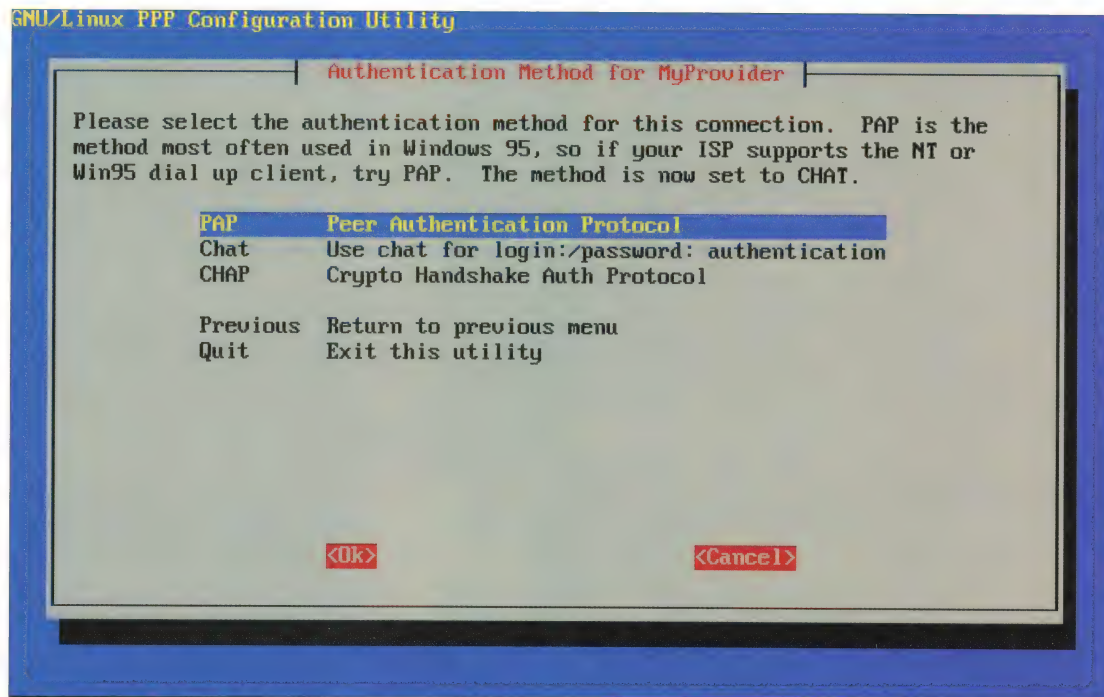


Above: Linux is the only way you'll see Mozilla running natively on Amiga hardware.

To dial up to your newly defined Internet connection, enter the command 'pon'. This can be done as 'root' or when logged in under any of the accounts that you gave permission to above. Note that entering 'pon' with no arguments dials up your default ISP, that is, the one called 'provider'. If you defined one under another name, you must supply that name as an argument, for example, 'pon MyISP'. Remember, as always, that Linux is case sensitive.

To test your connection, you can try a bit of web browsing with the console-based Lynx browser. Enter, for example, 'lynx http://www.debian.org'. If something goes





**Right:** If you can get your Amiga online, you shouldn't find hooking your Linux installation up to the 'net much harder.

▶ wrong, run 'pppconfig' and double-check your settings. To help trace the fault you can display the tail of the logfile for your PPP connection with 'plog'.  
Supplying the switch '-n' and a number will list that number of lines: for example, 'plog -n20'. Check the man pages for 'pon', 'chat' and 'pppd' for more help, and see the PPP HOWTO for further information.

## "Apt supports resuming of downloads from HTTP sites."

### Getting an official CD

Before you throw your hands up in disgust at Debian, why not consider getting an official CD to install from? You'll find it a whole lot easier. Locate a distributor near you at <http://www.debian.org/distrib/vendors>. In the UK, for example, Cheep Linux do the full 6-CD Debian 2.2r2 sets for m68k and PPC for just £10 plus £2.99 p&p. See <http://www.cheeplinux.com/>.

If you want to try a different flavour of Linux and you have a PowerUP card, then you can try LinuxPPC. See <http://www.linuxppc.com/> for details and download the installer ram disk image from the APUS homepage.

### Web resources

[www.debian.org](http://www.debian.org)  
[www.debianhep.org](http://www.debianhep.org)  
[www.debianplanet.org](http://www.debianplanet.org)  
[lists.debian.org](http://lists.debian.org)

[www.linux-m68k.org](http://www.linux-m68k.org)  
[linux-apus.sourceforge.net](http://linux-apus.sourceforge.net)  
[www.penguinppc.org](http://www.penguinppc.org)  
[www.linuxdoc.org](http://www.linuxdoc.org)

The Debian Homepage  
Find answers to Debian-related questions  
Debian-related discussion  
Debian mailing lists. Check out [debian-user](mailto:debian-user@debian.org), [debian-m68k](mailto:debian-m68k@debian.org) and [debian-powerpc](mailto:debian-powerpc@debian.org)  
The home of the Linux-m68k port  
The APUS home page  
Resources for Linux on PPC  
Home of the Linux Documentation project

Now you are ready to starting fetching packages from the web. Run 'apt-setup' again, this time choosing 'http' as the apt method. This time you can say 'Yes' to 'Use non-US software?'. This will allow you to install software containing cryptographic code onto your machine. Next you need to choose the Debian mirror site that you wish to download software from. It's generally a good idea to choose one located geographically close by - but not always. Anyway, choose your country and a local mirror; repeat this process for the non-US source if you are using non-US software. When done, run 'dselect', then 'update' to fetch the list of currently available software from your mirror. You can then mark and install packages normally. Apt supports resuming of downloads from HTTP sites.

### Getting graphical

Up to this point, we've been working entirely with console-based (i.e. text only) programs. Doesn't Linux have a graphical environment? Well, yes it does. Several, as a matter of fact.

The standard software for providing a GUI on Linux is the X Window System (or just 'X' for short). X runs as a layer on Linux, a bit like Windows 3.1 over DOS. However, X provides only the infrastructure for creating a GUI, not the GUI itself - to put it in more familiar terms, X encompasses the layers and graphics libraries but not Inuition. To be usable, you must at least run a window manager with X.

A window manager provides the usual controls on window frames like drag-bars, size gadgets and so on that let you manipulate windows. There are dozens of window managers to choose from, including programs like IceWM, Enlightenment, Sawmill, FVWM and so on. We have provided icewm for you to try out because it's fairly light and fast. One step higher than the window manager is the desktop environment, although this is optional. A desktop environment will generally provide ▶



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- ▶ services that integrate software into a common user interface framework. Typically, applications belonging to the same desktop suite will have a common look and feel and will you drag-and-drop files between them. Naturally, a desktop environment usually provides a file manager. We have provided GNOME desktop on the coverdiscs, but there are others to choose from such as KDE.



Above: A display manager such as GDM will automatically start X on boot up and present you with a graphical login screen

The programs you run on X don't usually care which window manager you are using - generally the window manager works transparently to the X client. However, most programs will use some form of GUI toolkit to build their interfaces, and these are significant. Popular toolkits include Motif (and its free equivalent Lesstif), GTK+ and Qt. GNOME, for example, uses GTK+.

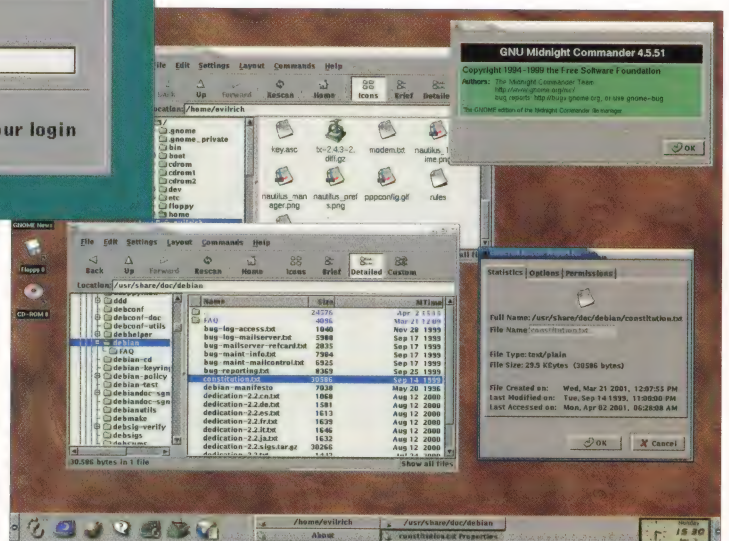
How do you get X up and running? Well, the version of X that ships with Debian is known as XFree86. To install a bare minimum of X services you should run `dselect` and install 'task-x-window-system-core'. This is a meta-package which will make sure all the basic X packages get installed. For a fuller environment, use 'task-x-window-system'. To install the GNOME desktop, install the meta-package 'task-gnome-desktop' and, optionally, 'task-gnome-apps'.

## "On the Amiga, the single X server uses the frame buffer device..."

Configuring XFree86 on an Amiga running Linux is, in some ways, easier than doing it on a PC and in some ways more difficult. It is more difficult in that there are no autoconfiguration tools, and simpler because there's just one X server for the Amiga. On PCs, there are dozens of different X servers (pre-XFree 4.0 anyway) each built with drivers for a specific family of graphics cards. On the Amiga, the single X server uses the frame buffer device (a device-independent way of accessing graphics hardware) and so can run on any graphics card.

The basic configuration that Debian creates for you should be enough to get your X server running without any tweaking, but it may not be the best resolution for your card. By default, X on frame buffer will run in the same resolution as the console beneath it was running. You can alter this by modifying the `/etc/X11/XF86Config` file. Try 'man XF86Config' and 'man fbdev' for more help.

To start X, call the script 'startx'. This will launch the X server with your default window manager, etc. - all running as the same user ID as the caller of the 'startx' script. If you just need to use X occasionally then this is probably the best way to do it. To get X to start every time you boot - and provide a graphical login screen instead of the console-based one - you need to install a display manager. Alternatives here include 'xdm', 'gdm' and 'kdm'. If you are using GNOME, then gdm is a good choice.



Above: The GNOME desktop provides a friendly user environment complete with a powerful file manager.

### Getting ahead

This has been the last part of our guide to using Linux on Amiga and we've only had time to take a very brief look at a small selection of topics. The question now is, "where do I go from here?"

Before you do anything, read the Debian FAQ - you can find it at `/usr/doc/debian/FAQ`. Then, perhaps, take a trip over to the LDP web page and read some of the guides there. It's a good idea to familiarize yourself with the shell even if you intend to use X all the time anyway. Then, just start playing about with some applications. If you are logged in as a user account and not as root you won't be able to do much damage to your Linux system.

Over the last few CDs we have included applications like the 'Mozilla' web browser, various mail clients like 'Mutt' and 'Balsa', graphical tools, utilities for making and burning CDs and so on. There are around 6,000 Debian packages on your nearest Debian mirror for you to choose from - this should keep you occupied for a while. If you ever get stuck, remember there are thousands of Linux users out there, just an e-mail away, who are only too willing to help you out.

Richard Drummond 





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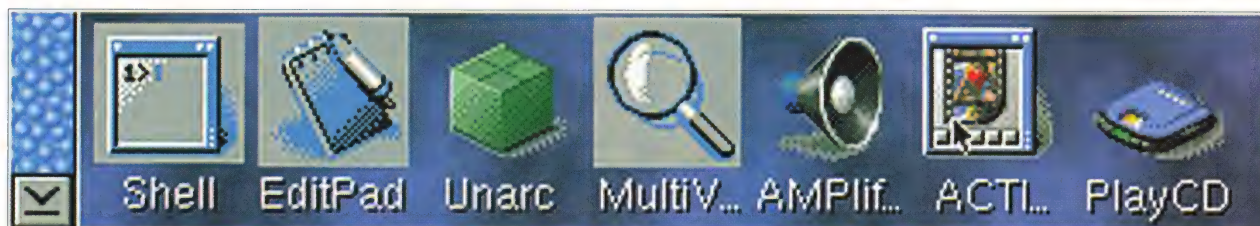
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# OS 3.9 Masterclass



## part 1

With Amiga's plans to advance their operating system to 4.0 and beyond, now would be a good time to delve into OS3.9, see what makes it tick and find out what you can do with it.

**M**any of our readers have complained that we reviewed OS 3.9 back in issue 16, then promptly seemed to forget about it. Well, we didn't. Whilst many of you have been sleeping soundly in your beds at night, we've been beaver away long after lights out to bring you the definitive guide to installing, configuring and getting the most from the latest Amiga Operating System.

Following Amiga's announcements in St. Louis concerning the planned development path for the classic Amiga OS (see news and features this issue), now is the ideal time to get to grips with the latest release. So, in the first part of our new OS 3.9 Masterclass, we'll guide you the basics of installing OS 3.9 and updating it to the latest specification with Boing Bag 1, to get everyone up to speed in time for next month, when we'll be getting our hands dirty.

### What you'll need

First off, you'll need to ensure your hardware is up to the task of running OS 3.9. For this, you'll need the latest ROMs (Read Only Memory) in your Amiga, which came with version 3.1 of the operating system. Checking the version of your

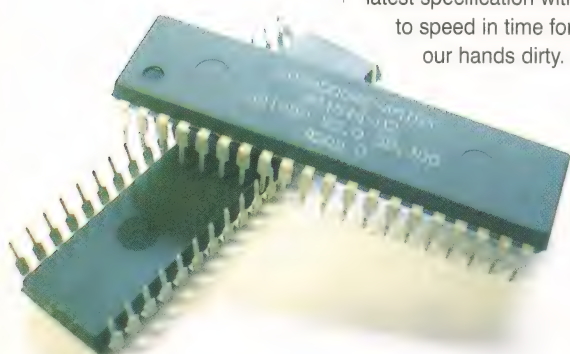
ROMs is easy - just open a shell and type "version" (without the quotes). This will tell you the versions of Kickstart and Workbench that your Amiga is running. If you've got Kickstart 40.xx, you've got the latest ROMs, but if the version command tells you you've got Kickstart 39.xx, you've got OS3.0 ROMs and you'll need to upgrade, so contact your friendly Amiga supplier and ask them to sort you out with the latest chips. Don't forget to tell them which Amiga you have, as there are different ROMs for different models.

## "Don't get angry when they don't seem to budge..."

If you do order yourself some new ROMs, chances are they'll arrive with some instructions on installing them safely, but it's worth stating here, just for the record, that you should be extremely careful when installing new ROMs. The pins are delicate, and although socketed, they can prove tricky to tease out of their homes on your Amiga motherboard. Don't get angry when they don't seem to budge, or go at them with a screwdriver, madly trying to lever them out of their sockets. It will only end in tears. Actually, whilst you're on the phone ordering your ROMs, you might like to ask about specialist chip removal tools, designed for the job. Yes, it will cost you an extra quid or two, but it could save you a lot of stress.

The potential pitfalls don't stop at removing your old ROMs, however. Installing new chips in the A1200 is potentially confusing if you don't read the instructions first, because the A1200 ROMs have one fewer set of pins than the sockets have holes. Make sure you leave the empty hole at the right end. Otherwise, when you turn your Amiga on again, you'll smell burning silicon and have to shell out for some new ROMs. If in doubt, ask your Amiga supplier for clarification.

Furthermore, ROMs - like all computer chips - are sensitive to static electricity, and you can build up a



Above: ROMs: Frisky



## "...we know how easy it is to forget the humble floppy ever existed."

charge of thousands of volts just by walking across a carpet. Touch the ROMs after that and you'll be on the phone for a new pair, so touch something earthed, like a radiator, before touching any components, or get yourself an anti-static wrist strap.

As for the rest of your set-up, you'll only need a modest 68020 CPU, 6MB of Fast RAM, a CD-ROM drive and a hard drive, although a faster processor, more memory and a graphics card are all highly recommended in this day and age. If you've got a nippy accelerator, PCI busboard and a graphics card like the Voodoo3, you'll be laughing. So let's get started with the installation!

### Cleaner, fresher!

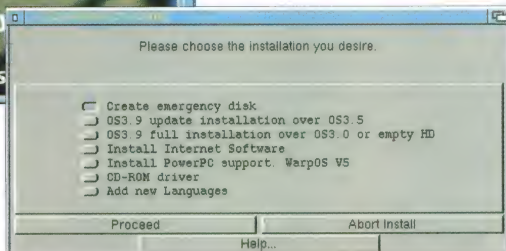
The first decision you'll have to make is whether to install OS 3.9 on a fresh partition, or upgrade an existing 3.5 partition. Installing on a fresh partition is the preferred method of upgrading any operating system, because it allows you to keep your old OS partition intact - so, if your new installation goes awry for any reason, switching back to your old partition is all that's required to return to a working system.



Creating Emergency  
In case of problems you  
disk to install AMIGA OS

However, if you have no choice but to install OS 3.9 over an existing OS 3.5 installation (you have no free partitions on your hard drive now that you've downloaded all those MP3s from the Internet, for example), you would be strongly advised to back up your system partition before making any changes, or lose all your hair when things go wrong.

Installing OS 3.9 to a clean partition on your hard drive is almost as easy as 1, 2, 3. Granted, there are a few more steps involved, but there's nothing to be afraid of - just follow the instructions in the CD insert that came with OS 3.9. The process should take you around half an hour. During the installation process, you'll need to create an Emergency boot disk, so you'll need a spare



floppy to hand, formatted of course. If you've not used floppy disks for years, you may have forgotten that you can just pop it in your Amiga, select the disk icon with a single click of the left mouse button, then hold down the right button and choose "Format Disk" from the "Icon" Workbench menu. Apologies if we sound patronising, by the way, but we know how easy it is to forget the humble floppy ever existed.

Use HDToolbox (in the 'Tools' drawer of your existing Workbench set-up) to ensure you've got adequate space on your hard drive for a fresh installation (we set up a healthy 215MB partition) and format it. If you're using a third-party file system like PFS (Professional Filing System), you should set this up now as per its instructions.

Rebooting from the Emergency Floppy (with the OS 3.9 CD still in your drive - the floppy will make some assigns to it as it boots), re-run the OS 3.9 installer and select "full installation". Select your new partition, then wait for a couple of minutes whilst the installer sets up your new system. A couple of languages, printer drivers, keymaps and backdrops later, you'll be asked if you

booted from your emergency floppy, which you did. Tell it this is so (although it would be nice if it could work this out itself), and the installer will also copy CD-ROM and graphics drivers across to your hard drive.

That's all there is to it! Once the installer has exited, remove your CD and floppy disk (put it in a safe place, now), and reboot. If you find yourself back in your old system, that's because of the boot priorities set up for your hard drive partitions. So, go back into HDToolbox and set your new partition's priority higher than the old one. Don't go any higher than 5 though, because this is the floppy disk's boot priority, and it's always best to leave this as the first device your Amiga tries to boot from. Finally, save your new boot priority settings, reboot once more and voila - a fresh OS 3.9 installation!



## Hey, big spender!

So, you want to get up and running with OS 3.9 huh? Good man! You've come to the right place. Hang on, what's that you say, you haven't bought OS 3.9 yet? You thought it would be on our coverdisc? Ah, no, that's just the Boing Bag update I'm afraid, you'll need that later. Go on then, off you pop. Scour the adverts in this issue, ring your friendly Amiga retailer and order yourself a copy of OS 3.9. It's less than 30 quid, for goodness' sake.

Need new ROMs as well? (See main article if you're unsure). Best get them at the same time then, young man. Go on, hands out of your pockets. There you are, doesn't that feel better?

Now, what about the rest of that hardware? Need a new hard drive? They make some nice big weighty ones these days, you know. Ditch that 20MB 33rpm dinosaur and invest in a nice new multi-GB drive - let your Amiga breathe! Not got a CD-ROM yet? They're cheap as chips these days!

How about a PCI busboard, Mr. A1200-owner? You've a Mediator or G-Rex to choose from - see our review of the G-Rex in this very issue and take your pick. Then you'll be wanting a graphics card to go with it, of course. Don't think you won't need one - it'll make your Amiga shine with colour! The Voodoo3 for example, though quite old in PC terms, will do wonders for your Amiga if you've been used to AGA up to now.



► “...one which will make a lot of hard-core Amiga users shudder at the thought.”

## It won't boot!

Don't panic! There are simple causes and cures for a failure to boot after installing OS 3.9 (or 3.5). This is usually caused by your IDE hardware not getting on with the new scsi.device, demonstrated by the way the Amiga boots up initially from cold: you hear some drive activity, then it reboots and hangs. SetPatch has patched scsi.device the first time it has run, so the second boot has the new device, which causes the failure. Some IDE splitters have this problem.

There are several arguments you can add to the SetPatch command to limit the updates. Boot from cold with both mouse buttons held down and select the option to boot without startup-sequence. In the shell you get, type “ed S:Startup-Sequence” and find the line that runs SetPatch. It's usually something like “C:SetPatch QUIET”. Add the extra arguments to the end of the line, leaving a space after “QUIET”, and save your changes.

Try adding “NOROMUPDATE NONSD” to skip all updates that may affect booting. If that works, try something less extreme like “SKIPROMUPDATES scsi.device”. This will only stop the update to scsi.device. You don't want to disable the others unless you absolutely have to.

### Upgrading from earlier versions

Installing OS 3.9 to a new partition is the safe approach, and lets you test it out while retaining the ability to boot from your existing set-up, but the downside is that you end up with a bare install. If you run a heavily customised system, you may have to spend a lot of time reinstalling everything on the 3.9 partition - not a bad idea in itself (you'll doubtless get rid of a lot of unwanted files that have accumulated on your system along the way), but one which will make a lot of hard-core Amiga users shudder at the thought.



Above: AmiDock

Left: Amplifier

Below Left: PlayCD



## WhatPatch?

SetPatch was originally intended to patch the Amiga's ROM functions to fix any bugs that may have been discovered. It was later enhanced to enable new features. For example, the A1200 and A4000 don't have AGA until after SetPatch is run. From OS 3.5 and upwards, SetPatch is also used to upgrade the ROM in ways that weren't previously used, which is why it now reboots the Amiga after a cold start.

Some of these patches apply to parts of the OS that are already loaded before SetPatch is run, particularly scsi.device and FastFileSystem. With a standard set-up, both of these have to be loaded before SetPatch can be run. This means that any patches won't take effect.

The solution is to apply the patches and reboot the Amiga. The patches survive a warm reboot so SetPatch only has to reset your system once. Rebooting is a minor inconvenience, but it becomes more irritating if you have other software that also reboots on a cold start. Install a Mac emulator and OxyPatcher and you could end up booting four times before Workbench loads!

We will look at ways of reducing the number of boots next month. Until then, either don't switch your Amiga off, or put the kettle on before you switch it on!

The alternative approach, once you've confirmed that 3.9 works on your system, is to install it on your old boot partition (you now have the new install as the bootable backup). Installing in this way is quite straightforward; the installer moves the contents of your WBStartup drawer into a backup drawer to avoid any conflicts - you can then move the programs back as you need them.

If you don't have the luxury of a spare partition to install on, it would be wise to backup your existing boot partition before beginning the OS 3.9 installation. You don't need a pile of floppies that reaches the ceiling to do this, just enough space on another partition to hold the contents of your boot partition.

Drag the icon of your boot drive to another partition. This will create a drawer with the same name as the boot drive and copy all files across. Should you experience serious problems booting your Amiga after installing 3.9, all you need to do is boot without startup-sequence (hold down both mouse buttons at boot-up and click the relevant button on the early boot screen). Assuming your boot drive is called “Workbench” and you copied it to your Work: partition, you can then type the following two lines into the shell:

```
copy Work:Workbench/#? Workbench: all
clone quiet
execute S:startup-sequence
```



## Boing Bag 1



Having given you all these dire warnings about the dangers of upgrading, however, it's time to do our 'Crimewatch' bit and say that such occurrences are rare. 99 percent of the time the backup is unnecessary, but you'll be so glad you did it if you ever find yourself part of the other one percent. Most of the problems reported by people upgrading to OS 3.9 so far relate to the new SetPatch command which also affected OS 3.5. If you are upgrading from 3.5 you have little to worry about, but those upgrading from an earlier version should read the boxout on SetPatch (below left).

**"The freshest face of your new system will be the start bar..."**

### WYSIWYG: What you see is what you've got!

Once you've installed OS 3.9 and booted into your new system, you should see several new elements on your Workbench screen. First off, your Workbench will be back in a window. Not a lot of people like this, so select "Backdrop" from the Workbench menu to turn this off, then "Window > Snapshot > Window" to save it.

The freshest face of your new system will be the start bar in the bottom left corner of your screen. This is called the AmiDock, and contains icons for launching programs with a single click of the mouse. At the moment, there are only the basic programs set up here - there are buttons to open a shell window, EditPad (a simple notepad utility), UnArc (for handling all those archives you'll be downloading), Multiview (generic file viewing utility), Amplifier (plays MP3s and other audio formats), Action (a fairly basic movie player) and PlayCD (which, er, plays audio CDs).

Which, we're sorry to say, brings us to the end of this, the first part of our OS3.9 Masterclass, except to say that if you use a four-way IDE splitter, you'll probably need to re-install the software that came with it (IDEFix, for example) on your new system to get rid of those annoying 'Please Register' requesters, so dig out that old floppy and re-enter your registration details.

Chances are that you'll now spend some time watching the movie trailers that came on your OS 3.9 CD (yes, you wondered what that 'Videos' drawer was for, didn't you?) and exploring the new utilities to see if they meet your exacting standards for performance. But, if you can't get excited about your Amiga's new operating system at this stage, don't worry - it's still early days. Besides, you haven't read next month's issue of *Amiga Active* yet, where we'll be showing you how to brighten up your backdrops, tart up your tools and add a bit of sauce to your Amiga's shell. Meanwhile, if you've any requests for particular OS3.9 coverage, please write in and let us know - the address is on page 54!



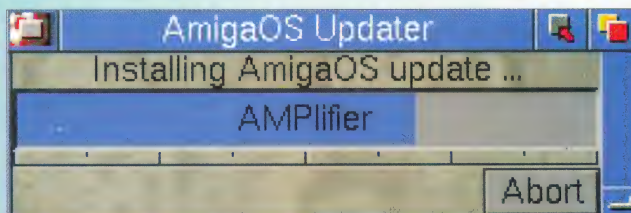
Part of the reason for covering the basics in the first part of this Masterclass is the recent release of the first Boing Bag update for OS 3.9, which we've provided for you on this month's coverdisc. Installation of the Boing Bag update is a doddle; you simply run the installer and insert the OS 3.9 CD when prompted.

You may have a problem if you have an older version of the Installer utility, however. The normal home for this is the Utilities drawer of your Workbench installation (Sys:Utilities), but some scripts in the past have been known to copy it to the C drawer (C:). This means that even if you have the correct version in Sys:Utilities, the older one in C: will be used, and the Installation will fail.

To prevent this problem, type "which installer all" in a shell for a list of all copies of the program in your command path. Then remove any older ones, leaving only the latest in the correct place (Sys:Utilities).

### What does Boing Bag 1 add?

- HDToolBox improvements
- AMPLifier enhancements, including support for streaming audio
- Enhanced shell
- AsyncWB adds asynchronous copying and deletion to Workbench.
- Reworked and optimised ReAction classes
- Improvements to WBRUN, SetEnv, MakeDir, RAWBInfo, MakeLink, BenchTrash and others
- More contributions



Above: Installing Boing Bag 1 on top of OS3.9 is as easy as watching a progress bar.

### Are there any problems?

After speaking with Haage & Partner, we understand there are a couple of problems caused by the first Boing Bag release. The first concerns the Amiga's maths libraries (which can be found, naturally, in your in libs: assign). The problem here will only arise if you've installed third-party math libraries on top of your OS 3.9 installation. There are three such libraries, but with the Boing Bag 1 update, only two are updated, which will leave you with a single remaining foreign library which conflicts with the other two. Replace this rogue library with the original from the OS 3.9 CD and you shouldn't encounter any problems.

The only other problem Haage & Partner were aware of at time of going to press concerned some new ARexx commands (placed in your Rexx:c drawer) which don't work properly, so refrain from using these for the moment. We'll have the latest revision to the Boing Bag update on next month's *Amiga Active* coverdisc!



# Extending ARexx

## Function libraries mean you can do far more with ARexx

**I**n previous months, we've been looking at ways of using ARexx to enhance other programs. This month we will see how other software can be used to enhance ARexx, by adding extra functions with the help of libraries.

When you call a function from a script, ARexx looks in several places. First it checks whether you have defined the function in the current script. It then looks at the internal function list before checking any external libraries. Finally, it looks for a script of the same name, with or without the ".rexx" extension, in your command path. This means you can create your own functions by saving them as REXX:MyFunction.rexx and calling them from any other script.

This is easy to do, but it is slow if the function is called often. The most interesting option is to search in an external library. There are plenty of libraries available, each one adding extra functions to ARexx. These are generally written in C, so they run faster than the same function written as a script. In many cases they provide access to functions of the Amiga OS that aren't available in a standard ARexx setup. You already have at least one such function library, rexsupport.library is supplied with ARexx/AmigaOS.

**"...they provide access to functions of the AmigaOS that aren't available in a standard ARexx setup."**

### Easier and faster

How can libraries make things easier for us? Consider the situation where you want to use a requester to get input from the user. AmigaDOS has the 'RequestChoice' command to open a requester and return the number of the button that was pressed. You can call this from ARexx using "address command", but how do you read the response? One method is to use the snippet of code in the "Code Snippets" boxout, [section 1](#) (above right).

The 'rxset' AmigaDOS command sets an ARexx clip, called "temp". The use of backticks around the

RequestChoice command mean this is executed first and the output used by rxset. Then we transfer the value from the clip to a variable and clear the clip to free up its memory. Clips aren't cleared when the script ends. This makes them useful for values that are used by other scripts but also mean we need to take care of cleaning them up ourselves. The same process using rmh.library is outlined in [section 2](#).

Not only is it easier to write and maintain, it is also faster because it doesn't have to load the rxset command from disk each time it is called, unlike the first example.

**"Not only is it easier to write and maintain, it is also faster..."**

Another job which ARexx scripts are often called upon to do is reading environment variables. Once again, you could use rxset with the GetEnv command in backticks, and clear up after, or you could use the GetVar() function present in rexsupport.library or rmh.library.

### Rexx Must Have

Functions such as reading environment variables, opening requesters, pattern matching and file handling are already provided by the Amiga's operating system. ARexx doesn't have such functions as standard, but there are several libraries that provide a gateway from ARexx to these OS functions. Most of them also provide a few extras, but the most comprehensive is probably rmh.library (which stands for 'Rexx Must Have').

While many of the operating system functions can be duplicated in ARexx, with the use of some DOS commands, several functions can't be provided without a library like this. For example, rmh.library can read and write icon tooltypes. It is common practice to include configurable details at the start of a script and expect users to edit the script to suit their needs. By using GetToolType() to read such information from the script's icon, you avoid the user having to edit your script, and



reduce the chances of them breaking it. Changing tooltypes is also more user friendly than asking someone to load your script into a text editor. It doesn't matter if the script is renamed as there is also a function to retrieve the name of the script. To read configuration data from a script's icon use the piece of code in [section 3](#).

This places the value of the HOMEDIR tooltype into the variable HomeDir, or returns an error if the icon or tooltype isn't found. If you want a default value rather than an error if the tooltype is not found, give this as a further argument after the variable name. In this case, you would probably want to use the script's own directory as a home directory, so you could use

## code snippets

```
1 address command
   'rxset temp `RequestChoice`
   "Requester Title" "Choose an option"
   "Yes|No|Maybe"
   choice = getclip('temp')
   call setclip('temp')
```

```
2 call addlib('rmh.library',0,-30,0)
   choice = EasyRequest('Choose an
   option','RequesterTitle',
   'Yes|No|Maybe')
```

```
3 if
   ~GetToolType(ProgramName(FULL),
   'HOMEDIR','HomeDir') then do
   /* handle error */
end
```

```
4 ScriptPath = ProgramName(FULL)
   if ~GetToolType(ScriptPath,
   'HOMEDIR','HomeDir',PathPart
   (ScriptPath)) then do
```

## communicating

```
1 /*
   $VER: CheckWebPages.rexx 1.0(27.3.2001)
   by Neil Bothwick for Amiga Active! */
```

```
2 options results
   call addlib('rmh.library',10,-30,0)
   call addlib('rxsocket.library',10,-30,0)
   call addlib('rxlibnet.library',10,-30,0)
```

```
3 eol='eol0a'x
   Now=left(date(W,3),' date(N) time()
   'GMT'
   PageList='CheckWebPages.list'
```

PathPart() to extract this from the script's path, as illustrated in [section 4](#).

Because many of the functions handled by rmh.library are standard AmigaOS functions, other libraries have the same functions with the same names, although they may not use exactly the same syntax. One solution is to open the library with a higher priority, but you cannot rely on this, because the user may have already run another script that opens the library at a lower priority. The solution with this library is to prefix all function names with "RMH\_". The functions' behaviour is identical, but this ensures that you always get the rmh.library function and not one from a previously opened library.

**"...this ensures that you always get the rmh.library function and not one from a previously opened library."**

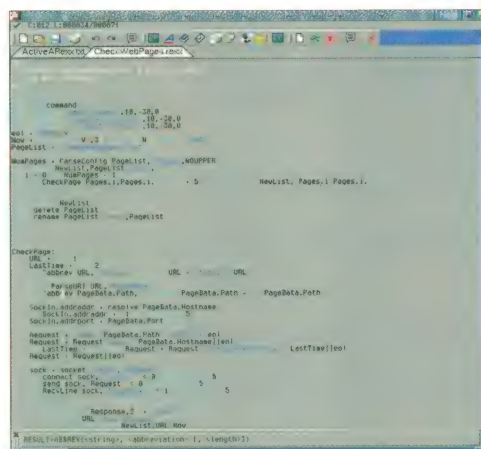
### Communicating across the World

If your Amiga is online, sooner or later you will feel the urge to write a script to communicate with a remote server. This requires some specialised functions to open connections to a server. You can do it with the TCP: device (mounted by Miami or Genesis) by reading and writing to it as though it were a file, but there is a better way. Rxsocket.library provides a faster and more elegant way of communicating with servers.

This script (in the "Communicating" boxout, below left) uses functions from rxsocket.library and rmh.library to check a number of web pages to see if they have changed since the last time you looked. It reads the list of pages from a file, each line of which contains the URL of a page and the time it was last updated, or nothing if the page hasn't been checked yet.

**Section 1:** It's a good habit to put a version string at the top of each script, it may make life easier later on. You should be able to create a macro in GoldED to create it from a hotkey (see last month's Active ARExx).

**Section 2:** We are using three libraries here. rxsocket.library provides most of the Internet related



**Above:** An editor with syntax highlighting makes it easier to keep track of brackets, keywords and so on.



## "The standard end of line marker for Internet communications is CRLF..."

functions, rxlibnet.library has some support functions.  
**Section 3 (previous page):** The standard end of line marker for Internet communications is CRLF, so we put this in a variable. The next line puts the current date and time into the standard format. PageList contains the path to the list of pages to check.

**Section 4 (right):** ParseConfig is an rmh.library command. It reads a text file, ignoring blank lines and those starting with "#" or ";". It puts the results into a stem variable, the first word in stem.i and the rest of the line in stem.i.value. We will need to update the page list with new dates, so we create a new list. Then we call the CheckPage function for each item. We check the return code from the function and rewrite the old data back to the config file if the function returns an error.

**Section 5:** Then we tidy up and replace the old data file with the new one. Here is the CheckPage() function that does the real work.

**Section 6:** Read the arguments and add the "http://" part to the address if the user omitted it. ParseURI is a rxlibnet.library function. It takes an http:// address and splits it into the various component parts, storing them in a stem variable. The path part of the address must begin with a "/", so we add that.

**Section 7:** Now we build the request to be sent to the server. This has three lines. The HEAD command tells the server to return only the headers of the page. The Host: header tells the server which domain we are connecting to and the If-Modified-Since header tells it to only return the data if the page has changed since that date.

**Section 8:** We now set up the SockIn stem with the data required to make the connection. This uses the resolve() function to get the IP address from the hostname.

**Section 9:** This is the part that actually communicates with the server. This type of communication is based around creating a socket and connecting it to a socket on the remote machine. First we create the socket and

## "...creating a socket and connecting it to a socket on the remote machine."

then connect it to the web server. All the information needed by connect() is in the SockIn stem we created. Then we simply send the request to the socket and read the first line of the response. this line will be of the form "HTTP/ver Code Text". We are interested in the code, which will be 200 if the page has changed, 304 if it is unchanged and 404 if it is no longer there.

## communicating (continued)

```
4 NumPages =
  ParseConfig(PageList,'Pages',NOUPPER)
  call open(NewList,PageList'.new','W')
  do i = 0 to NumPages - 1
    if CheckPage(Pages.i,Pages.i.value) = 5
      then writeln(NewList,Pages.i.Pages.i.
        value)
    end
```

```
5 call close(NewList)
  call delete(PageList)
  call rename(PageList'.new',PageList)
  exit
```

```
6 CheckPage:
  URL = arg(1)
  LastTime = arg(2)
  if ~abbrev(URL, 'http://') then URL =
    'http://'URL
  call ParseURI(URL,'PageData')
  if ~abbrev(PageData.Path,'/') then
    PageData.Path = '/'PageData.Path
```

```
7 Request = 'HEAD 'PageData.Path'
  HTTP/1.0'eol
  Request =Request'Host:'PageData.
  Hostname||eol
  if LastTime > '' then Request =
    Request'If-Modified-Since:
    'LastTime||eol
  Request = Request||eol
```

```
8 SockIn.addraddr =
  resolve(PageData.Hostname)
  if SockIn.addraddr = -1 then return 5
  SockIn.addrport = PageData.Port
```

```
9 Sock = socket('INET','STREAM')
  if connect(sock,'SockIn') < 0 then
    return 5
  if send(sock, Request) < 0 then
    return 5
  if RecvLine(sock,'Response') < 1 then
    return 5
```



## communicating (continued)

```

10 select
when word(Response,2) = '200' then do
say URL 'has changed'
call writeln(NewList,URL Now)
end
when word(Response,2) = '304' then do
say URL 'has not changed'
call writeln(NewList,URL Now)
end
when word(Response,2) = '404' then do
say URL 'was not found'
call writeln(NewList,URL Now)
end
otherwise do
say 'ERROR: command returned' response
call writeln(NewList,URL LastTime)
end
end
return 0

```

**Section 10:** Finally, we act on the code. You could use `rmh.library's OpenURL` function to load any changed page into a browser. The error handling is minimal, because it would have cluttered up the example. Each communication with the server is checked, and a failure causes the function to return a code of 5. This means the script simply skips any sites that cannot be contacted, leaving the old information in the data file. However, you should really add checks to ensure the data file is read correctly and that the update of the new file works.

Neil Bothwick **A**



## Opening libraries

In order for the ARExx process to search external libraries for functions, it needs to know which libraries are available. The `addlib()` function takes the form "`addlib(name,priority,offset,version)`". Name is just the name, not the path, the library should be stored in LIBS:. Priority is between 100 and -100, libraries with higher priorities are searched first. This is normally set to zero, but you may need to change it if you use two libraries with a function of the same name, to make sure you get the one you want.

The offset value is usually, but not always, -30. This should be in the library's documentation. The version is the minimum acceptable version of the library, use zero if any version will do. This is an integer, you cannot check for minor revision numbers with this function, although there is another way to do this.

Once the library has been added it is available to all ARExx scripts. If you are writing scripts for your own use, you can open the libraries you use most often from a script and put this in `WBStartup`, with its icon's default tool set to `rx`. `Addlib()` doesn't actually open the library, it merely adds it to ARExx's list of available libraries. This means there is hardly any memory penalty in adding libraries on startup.

If others will use your scripts, it is safest to add all needed libraries in each script. `Addlib()` is supposed to return a value to indicate the success of the operation. In fact it always returns one the first time you try to open a library and zero on subsequent attempts, irrespective of whether the attempt was successful, or even whether the library exists. Here is a way to check a library and then open it.

```

options results
libname ='rexxdosupport.library'
version = 3.5

/* Only proceed if library has not
already been added */
if ~show('L',libname') then do

/* Check that the library exists */
if ~exists('LIBS:'libname) then do
say libname 'not found in LIBS:'
exit
end

/* Check its version */
parse var version ver '.' rev
'version >NIL: LIBS:'libname ver rev
if RC > 0 then do
say 'You need at least version' version
'of' libname
exit
end

/* Open it */
call addlib(libname,0,-30,0)
end

```

The "options results" at the start ensures that any return codes from commands are stored in the `RC` variable. This means you can execute AmigaDOS commands, like `version`, and check the result.



# Beware the Hatchbacks of Doom!

It sounds crazy. Chances are it's even crazier. Amiga Active talks to Chris Kelley of Delsyd Software about destroying buildings... with cars?

**T**hings have changed quite a bit since Delsyd Software was started," Chris Kelley, of Delsyd software explains. "In the beginning, there were eight people on the Delsyd team, a plethora of ideas for games, and we were crazy enough to try to sell games in the Amiga market."

Two years went by, and thanks to failing hardware, a lack of funding, and some nasty news from Gateway, the Delsyd team dissolved. Most of the original team members are now watching Delsyd's progress from a safe distance.

"In September 2000, I launched [www.delsyd.com](http://www.delsyd.com), and started hosting the Delsyd site from my home. I knew that the only way to get things done the right way is to do them yourself. I had been toying around with a 3D engine for a few months, but it really had no direction. The removal of game-related material from [delsyd.com](http://delsyd.com) reflected this general lack of hope.

"Around the end of February, though, I had a brainwave. I started rewriting my 3D engine with a vehicular combat game in mind. My friends and I are big Twisted Metal fans, and

I've always wanted to write a TM clone. Now, [the beginning of April] the 'Hatchbacks of Doom' 3D engine is half finished."

## Hatchbacks of \*what\*?

"Hatchbacks of Doom is set in the very near future - it might as well be tomorrow [Damn, I'm busy tomorrow. Can you make it next Thursday? -Ed]. As cities all over the world begin to expand, they are faced with a problem: their downtown areas are dying. Most of these cities reach an agreement - they decide that the cheapest way to demolish these downtown areas is to start a bidding war



Above: A view of the city from the rooftops.

"Around the end of February, though, I had a brainwave..."



## "One of the coolest features of HOD is the fact that everything in a level can be destroyed."

between demolition contractors.

A small group of hatchback enthusiasts decide that they will attempt this monumental task. In their minds, hatchbacks were designed to be the ultimate commuter/downtown driving cars. Without the limited parking and stop-and-go traffic of a congested downtown area, there is no reason to own an economy car. So they decide to use their cars to do the destruction."

Ah, it's all becoming clear now! Do continue, Chris.

"So, this tight knit group decides to arm their beloved hatchbacks and go kick some downtown butt. They go before several city councils, and negotiate a deal. For every building that is destroyed, the driver who destroyed it is rewarded with cash on the spot. If a driver's car is destroyed by another car, that driver loses his money to the guy who blew up his car. The cities feel that this gladiator aspect will not only ensure that the downtown areas are demolished quickly, but will also attract tourists, spectators and betting pools.

"The levels in HOD will be located around the world. We already have some exotic locations picked out, as well as some more traditional ones. I'm working closely with a former Delsyd Software artist, Orin Shepherd, to squeeze as many different locations into the game as possible. Some of these locations will be completely fictional and some of them will reflect actual cities. My home town will probably be one of the levels, as we have a similar problem with our downtown area!

### Total Destruction!

"One of the coolest features of HOD is the fact that everything in a level can be destroyed. Buildings, monuments, train stations and so on can all be blown to bits. Each building is divided into destroyable sections, and each section can only take a certain amount of damage before falling apart. Plus, an explosion in one part of a building will damage surrounding areas of the building: you can create chain reactions in some weaker structures.

"The weaponry will be standard TM fare - several types of missiles, remote detonated bombs, napalm, etcetera. Each hatchback



Above: Insane texture detail... and the engine's only half finished.



Above: Water reflections at dusk. Someone throw me a pebble...

will have its own special weapon and a built-in machine gun. Each driver will have his/her own storyline, so that you can play HOD in a movie-style story mode.

"The 3D engine for HOD, meanwhile, takes an old idea from the days of 2D tile-based games and moves it into the world of 3D. HOD's engine is divided into several sets of layers. The first layer is a ground layer, the second contains buildings, the third contains detail textures and so on."

This technique, Chris tells us, brings several advantages to the game engine, particularly in certain areas that are key to the destroy-it-yourself nature of the game world. He outlined the main points to us:

1. The engine is very fast for the amount of polygons it pushes around. The level viewer I've written for HOD already reaches 30-40fps on a K6-2/400MHz/Voodoo3 machine - it should be much faster once optimizations are completely finished.

2. The amount of polygons in a level can be controlled right down to the single triangle level. In short, the speed on any level we build in our editor can be tweaked without having to touch a 3D modeller.

3. The entire landscape can be changed on the fly. Most 3D games are specifically designed to have static 3D maps because they are doing a lot of pre-processing with each level. With Chris' HOD engine, you can blow up a dam and flood a city or blow up everything in sight, all in real time.

4. Pathfinding, collision detection and the like take very little code, which means more processor time for gameplay. Nuff said!

"If anyone is interested in building an engine like this, I am in the process of writing a tutorial on tile-based 3D engines. It will be available on [www.delsyd.com](http://www.delsyd.com) very soon. The game engine uses OpenGL as its graphics API and is coded in ANSI C. We also have plans to utilise some of the special features of the Matrox (Amiga's graphics card partner) line of cards, such as Environmental Bump-Mapping.

"The game will ship with a techno soundtrack arranged by Sky Lenzen, one of my co-workers at IBM. It will come with two-player support, MP3 audio support and a user-friendly version of our level editor! If you want to hear a sample of Sky's work, take a look at [www.geocities.com.shadowzro](http://www.geocities.com.shadowzro), or search for ShadowZro on [www.mp3.com](http://www.mp3.com)

"HOD is being developed on an x86 Windoze box at the moment, but the AmigaOne is its target platform. The code for HOD is 99 percent portable: moving the engine to the PPC AmigaOne should only take a day or two."

## "The code for HOD is 99 percent portable: moving the engine should only take a day or two."



# EARTH

## 2140

The real-time strategy genre continues its resurgence on the Amiga thanks to e.p.i.c. Interactive.

In his book *"The Art of War"*, Sun Tzu wrote that *"All warfare is based on deception. Therefore, when capable of attacking, feign incapacity; when active in moving troops, feign inactivity. When near the enemy, make it seem that you are far away; when far away, make it seem that you are near."* It's obvious that Sun Tzu didn't play many computer games, and definitely never even sniffed at the war-torn breeches of Earth 2140.

Ported by Pagan Games from a 1997 PC release by Topware, Earth 2140 is a mouse-driven strategy war game in the same mould as the Command & Conquer series from Westwood

Studios. Amiga fanatics may remember that Westwood first invented this genre on the Amiga in the form of Dune 2 in 1992.

Set in (you guessed it) the year 2140, the World has undergone a consolidation of countries and cultures, emerging into the classic scenario of East vs. West. The UCS (United Civilised States) are made up of the Americas, Western Europe and North Africa, while the ED (Eurasian Dynasty) cover Eastern Europe and Asia. Long wars have lain waste to various parts of the world so as to make them uninhabitable, namely most of Africa and Australia. Thus the Earth's population has retreated to underground cities, and the ED transformed their population into a blend of human and machine - androids.

It would be a pretty short-lived game if these two opposing forces did the right thing and swapped peace symbols and hippy tunes, so now is the time for you to get to work and ensure that conflict prevails.

### Prepare for battle

The game comes on a CD in a DVD-case, and installation is simple. Earth 2140 is playable on standard or PowerPC (WarpOS) Amiga systems with a graphics card (up to 800x600), so it's just a matter of clicking on the relevant icon once installed. You're then greeted with an exciting (if blocky) intro movie to get your blood pumping.

The main menu itself is quite interesting as you may scroll left or right with the mouse to show

different game options (save, load, credits etc). Of main interest for the rookie will be the database of buildings and units within the game. Keep to the middle though and you are faced with the decision to command either the ED or UCS forces in their attempts to be equally nasty to each other. Handbags at dawn this isn't.

Differences between the forces are essentially few, though death is despatched in different ways as each side has its own unique weapons. The ED don't have the

If you're familiar with Command & Conquer (Playstation/PC) or Napalm (Amiga) you'll be comfortable with Earth 2140's control system. The left mouse button is used for nearly everything (selecting units, buildings, destinations, targets), whilst keyboard shortcuts are used for orders such as escort, attack, guard, add/remove units. One useful keyboard feature is the ability to select groups of units and assign numbers to them, which then makes controlling that group a simple

**"...more like a pint-sized Imperial Walker from The Empire Strikes Back"**

'Raptor' for instance. Why it's called a Raptor isn't exactly clear; it looks more like a pint-sized Imperial Walker from The Empire Strikes Back.

matter of pressing the relevant number. So if, for instance, you wanted a commando unit of mini-me Walkers (Raptors, sorry), it's simply a matter of dragging a box



Above: The Japanese businessmen withdrew their offer for the Millennium Dome.



around them with your mouse button and pressing CTRL-1 to assign them to Group 1. You can go further with this group's actions by assigning them to one of three Virtual Generals (via the control panel) who will act either offensively or defensively with that group. How useful they are in practice is debatable; I found it better to command groups myself in the thick of battle, but at least it's an option that no other game I know of has.

Anyone not familiar with other RTS titles had better not rely on the manual too much, as there is limited information and no basic tutorial to give battle-virgins any clue. The manual has blatantly not had as much care and attention lavished on it as the game, with spelling mistakes and bad design, as well as some rogue German words. A shame, but not the end of the world.

Originally promised to have some sort of MULTI-PLAYER support, this hasn't materialised, though Pagan have promised to have something in place for the mission packs they plan to release.

### In the thick of it

On the left side of the screen is the Control Panel. You can place it on the right if you prefer by pressing Tab. On it is an overview of the map, and once your command centre vehicle has been directed to a site of your choosing and transformed into a

building, you have many other building options available to you. For the rookies to Real-Time Strategy (RTS) games, it's best to start off with a power station, then a mine at the ore site, a refinery, and some Banthas (trucks) to transport the ore between the two. This is the basic setup of any successful campaign in E2140, as you need the power for the mine/refinery, and the income from the mine/refinery to fund any other buildings you may require, such as the heavy weapons

black if you haven't explored that area yet. The terrain becomes grey if you have explored it, but any enemy are hidden from view until they are in your line of sight. Tension is never far away due to this as you don't know where any enemy have moved to unless you send out regular patrols, or build sighting-posts.

Missions are reasonably varied, ranging from building a complete base of operations

An important tool, the Map will show you which areas you haven't explored (black), areas which you know the terrain of but not the enemy's positions (grey) and ore deposits (green). Your units and enemy units are also shown, and flash white when engaged in battle.

**"...the adrenaline rush when you fire off some missiles at the enemy and watch the smoke trails... amazing."**

factory. Defend your base well, especially your command centre, as it's the only building that is impossible to replace.

Graphics and animation are great, with fantastic explosions and clear differences between units. The colour of the terrain is a little bland initially (the levels brighten up later), but it could be argued that as the world is in a mess, it'd look weird if it were psychedelic. The developers Topware definitely spent a lot of time on the look of the game, and it's to Pagan's credit that they have managed to preserve everything for the Amiga version. Just wait for the adrenaline rush when you fire off some missiles at the enemy and watch the smoke trails... amazing.

A very impressive gameplay feature is the fogging effect. Essentially this is a line-of-sight device, where units can only see a prescribed distance around them before the map becomes

Earth 2140 is a plethora of weapons, grunts with guns and bazookas, Mechs armed with rockets, lasers, plasma rays, warships, helicopters and nuclear missiles. Pyrotechnic heaven.

and wiping out the enemy to repairing an old base and infiltrating enemy structures. Ultimately it's a case of kill or be killed, mixed with resource management and tactical decisions. The difficulty curve is just right, which is something I found lacking in the steroid-guzzling Napalm (but then again, I may just be a wimp).

These kind of games are always fun if done well, and Pagan have achieved an excellent conversion of a competent PC

game which will keep fans of the genre sweating it out at their keyboards and adding numerous cold coffee-cup stains to their desks. Earth 2140 really is a must-have for anyone remotely interested in this type of genre. Go get 'em soldier!

Gary Storm **A**

## Earth 2140

**SYSTEM:** Graphics card, 24MB RAM, 20MB hard drive space, 68040/40 minimum recommended processor, PowerPC supported for optimal performance.

**SUMMARY:** Great graphics, very playable, good speed and varied missions. Very playable. No multi-player options and poor manual though.



Above: Pass the marshmallows.



Above: Money Money Money.



Above: Gatecrashers get their arses kicked.



✉ Your chance to pester the Editor! Write to: Amiga Active Magazine, 14 Victoria Road, Bournemouth BH1 4RR.

# InterActive

Another bulging postbag of comments, mostly concerning St. Louis...



## Tele show-going.

Departing a little from all the interesting news at the show, I wanted to say that the live webcast (problems aside) was amazing! I've already thanked the guys online "live" during the broadcast, and I think not only they but also the programmers behind StreAMI, Webvision and Stricq should be applauded.

I managed to get great sounds, pictures and text live for over two hours. The broadcasters were mostly funny informative and seeing / hearing Petro and Dave Haynie interviewed for the first time was great. This is probably the most interesting thing I have done with my Amiga in years (i.e. much better than usual web surfing!) and these guys made it possible. Thanks.

**Adrian Newman**

Well done all round, guys, you made Ade a happy man. Let's hope the emphasis on streaming technologies we'll see in future versions of the operating system make this sort of event even better in the future so we can all visit shows without, er, visiting them!



## Torn apart?

Well, the cloak finally came off. What can I say, I'm surprised and quite saddened by Amiga Inc.'s plans to rip what's left of our community apart.

I don't object to the PPC move at all, what I object to is the fact that Amiga Inc. seem to be missing the one vital thing they should have used. Yep, MorphOS.

I can't believe that Amiga Inc are doing what happened before. All this serves to do is rip what's left of a very fragile community apart even more.

Not only am I saddened, I'm disgusted. After all the hard work that people behind the scenes and in front of it have done to try and continue the "Amiga" into the 21st century, and Amiga Inc. go and screw it all up in one easy step.

**Yours Seriously Mortified,**

**Mark 'tecno' Wilson,  
Team Member of AmiBench**



Amiga Inc. want their OS to be advanced to PPC, and they have to find a way of doing it that fits into their business reality. Obviously it would be great if they could find a way of bringing MorphOS into the equation, but that's something they have to work out with the MorphOS team. We certainly hope they can find a way to work together - the MorphOS team have done an amazing job.

It would be nice to see Amiga putting some real effort into sorting things out with MorphOS, but they are walking a fine line here. This is just the latest chapter in a long-running dispute that dates back to the WarpUP / PowerUP split. I'm sure Amiga Inc. would find their lives a lot easier if this split didn't happen, as they are now firmly stuck in the middle of it all. Unless the two sides can be reconciled, inevitably someone was going to get hurt. We can hope Amiga can reconcile the two sides, but it's unfair blaming them if they can't. The last thing Amiga want is a split in the community

**"Not only am I saddened, I'm disgusted."**

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Write in and voice your opinions on all things Amiga. We're listening!

Emerging from his Tibetan hideaway to solve more problems.

Setting up a cyber café with PCs and Amigas: It's possible, but how?

We'll spill the beans on everything. In the world. Ever. Or just some of it.

Pot Noodles, fast cars, split-screen vans, Amigas and techno music. It's...



Unless you want to be cast into the gorge of eternal peril, e-mail us at: [interactive@amigactive.com](mailto:interactive@amigactive.com). Have at you!

**"...it wasn't significant enough to warrant the tag 'earth-shaking'..."**



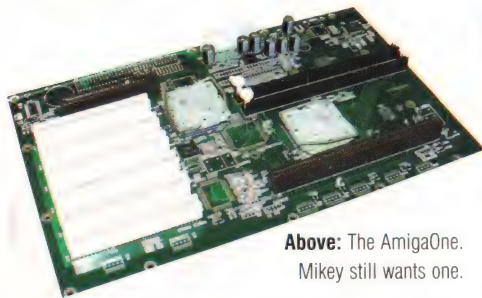
## Splitting the market?

**Although I generally welcome the news from St. Louis, I cannot help but feel that it wasn't significant enough to warrant the tag "earth shaking."**

**I cannot see any day with the current announcements where Amiga will become a spoken word in the high streets and in rooms across the world once more. Let alone being able to purchase stuff once more in the high street or local retail park.**

**I also find it difficult to accept that the tie up with Sharp is official with them. Again, there is no mention of it on their web site, to confirm the tie up.**

**Amiga are going to have to prove that they are more than merely an "afterthought" to the recent announcements and not as it would seem "getting in via the back door" through their relationship with Tao, who must be getting fed up with this situation.**



Above: The AmigaOne.  
Mikey still wants one.

**Having said all that I will purchase the AmigaOne and OS 4.0 if the prices aren't extortionate.**

**To recap, nothing has really changed, the Amiga OS development continues (thank you) but we will remain a minority platform, and possibly even smaller thanks to the MorphOS situation.**

**Mikey C**

None of the good stuff has gone from Amiga's plans - the thing that would get Amiga in every retail park is not the nature of the desktop version but the deals such as the one with Sharp that will get the AmigaDE on

a wide range of third party products. Yes, we agree it looks bad that Amiga are making these announcements without something appearing on their partner's web site, but the tie-ups are real, and there are more to come.



## Mistress of Everything

**Ciao! I'm Anita Ajilon. Queen, Princess, Mistress of Everything I encounter. Ok, my boyfriend has many Amiga products. My big question is this: will there ever be an Amiga notebook? Will there ever be something that I can order that is so magnificent that I can look at it and admire the beauty and enjoyment? That's what I desire. I want an Amiga notebook! I want to be able to open my eyes and look to my day at an Amiga that is so elite that I and my girlfriends can chat and see each other and have total sophistication in our computerization for that**

**"...so magnificent that I can look at it and admire the beauty..."**



## The slow boat

**Just a note to say I really enjoy your great mag. I'll keep buying it as long as I can hold out hope for the platform. But here's the problem. I just got my latest issue at my local big-box bookstore in the other London (in the colonies, Canada) on March 24th. Unfortunately it is Issue 17 from February, which came out January 25th. So that's, what... two months out? Maybe it's just my impatience for news, but really, how does it get here? I'm thinking slow yak through Russia. I'm on to the local store, but if you could enlighten me, it would be appreciated.**

**Ted Bartholomew.  
London, Canada**

**"I'm thinking slow yak through Russia."**

We used to use the yak, but he's been quarantined thanks to the Foot and Mouth outbreak. Now Bluey has to swim across the Atlantic with a crate of each month's mag on a raft tied to his collar.

Unfortunately, distributing overseas either involves long delays or absurd increases to the cover price. If you subscribe, however, your copy will be sent over by rocket propelled courier pigeon instead, and will arrive on your doorstep only a few days after it hits the shops in the UK. Crosswinds permitting.



► experience. We want to be able to look on our PDA's and see each other and shop and spend and expound on things with our unlimited Amiga toys!

Ok, so, now the big fat AmigaOne is "heard-this-story-many-years-before-already" about to be released. Well I surely hope that for this "last go" there will indeed be something that is fun. I hate the Amiga interface. I think it totally stinks. I deplore it. I want something that is attractive. I want something that I don't have to learn. I want something I can use! I want something that is friendly and not all that weird CLI stuff. I want a friendly pretty and intuitive environment to work in. I don't want big gigantic boxes with big ugly graphics that make me feel small. I don't want that. I want simplicity and I want to be able to see that my boyfriend is happy and I want to be happy with what we are doing with this Amiga thingy.

I'm going to go now, but I promise I will be back in a couple hours after I play with the Toasters! Ciao!

**Anita, Mistress of Everything**

Back away slowly, readers.... Seriously, it looks like you'll be getting your wish, Mistress. Check out the info on the Sharp Zaurus and Psion netbook in our newpages!



## Print Groups!

Because Amiga Active is the only official Amiga mag in the UK, I think you should take up AF's idea of printing the user-groups in the mag. In this climate people need to know where the nearest user-group is, and what better than to print it in your magazine? Not everyone is linked to the net or has CD-ROM etc (even though they should have!). Your magazine is one of the last bastions of Amiga & advertising. What do you think?

**Barry Riddiford**

We tend to think that anyone who is serious enough to want to attend a user group is serious enough to access information on the CD-ROM. What to the rest of you think, are we wrong to put this stuff on our coverdiscs? Oh, and CU Amiga did it first, so there!

## "That woman... can she shoot straight?"



### The eyes have it?

A tip - don't read the mag in a hurry. I did & thought the AmigaOne A1200 would cost £600! If it could cost £400 or less I would be happy.

**Peter McIlroy, Belfast.**

P.S. That woman on P7, issue 19 - can she shoot straight?



From what we understand, the AmigaOne pricing should be a reasonably pleasant surprise - and yes, she can shoot straight. She just put her Nikon-Zeiss CyberOptic eyes in the wrong way around on the morning the publicity shots were taken.



## Dear Sir...

**I am not renewing my subscription to Amiga Active for the following reasons:**

1) I am a long-time user of Amiga products and have supported it through the good times and the bad. I love my 'old' 1200 (030) desktop model which is considered to be old hat these days as it seems that some are trying very hard to make their Amigas look like just another PC!

2) I feel that your magazine does very little to encourage the many who still have older machines to stick with it and eventually upgrade. Hardly any space is allocated to the Classic Amiga owners as the mag is almost solely given over to high tech jargon that is way above the heads of many - myself included.

3) I am not what some would term 'computer literate' but I still get a lot of enjoyment out of my machine and a certain buzz when I figure something out for myself that works. Your mag seems to be aimed at those who are already well versed in the intricacies of programming etc.

4) A small section - say 4 or 5 pages of the mag - could have been aimed at those such as I with a view to keeping interest in Amiga old and new and reviewing and grading older games (many of which still grace the shelves of retailers).

5) Finally, I know that Amiga must change to survive in competition with other platforms but I feel that many potential customers (who at present own older Amigas) will drift to PC unless their interest is maintained and they are in due course encouraged to become the proud owners of an AmigaOne.

Yours sincerely,

**Mr. Derek Johnson**

We're sorry to hear that you won't be subscribing any more, and hope that you keep an eye on the mag at your local store to pick up any issues that you feel suit you. As we've said before, we know it's not possible to please everyone.

To answer a few of your specific points - we already have far more than five pages a month dealing with current software and hardware, but we can't review products that we aren't sent. We review the products there are to review and use the rest of the space for features and tutorials. Many of the tutorials (such as the new OS3.9 tutorial starting this issue) are written to be comprehensible to the less techie users, but we'd be doing our many techie readers a disservice if we didn't provide material for them too.

We do cover a fair bit of forwards-looking stuff in the magazine, because it makes sense to us to talk about the technology that people will be using tomorrow as well as what they are using today. Hopefully our readers will be that much better prepared for these developments when they arrive. As for using the space to re-review old games - I suggest you take a look for the Amiga Games Database (AGDB), which has appeared on our coverdisc several times. Surely it would be more of a waste of our space to replicate material that is already available than do something new?





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## Ask the Guru

Our Guru takes a break from his remote Tibetan hideaway again this month to attend to more of your questions.



**Software**

### Set top box? Hmmm

Greetings Amiga Active,  
I am trying to turn my ailing CD32 into a set top box (some fool in a chat room put the idea in my head!) and I was wondering if it, along with an SX32 Pro, would be capable of running OS3.5? Oh, and My A1200's Apollo 1240 just died! Damn.

Thanks in advance for any info.

**Gerald Higgins**

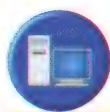
There are certain fixes to the timing problems of the ID.4 motherboard, but without more information, I can't say specifically what you would need to do. Suffice to say though, you will need to be extremely proficient with a soldering iron as the modifications involve connecting to very small areas on the motherboard. The exact details depend on your revision of the Budgie chip, but entail the removal of a couple of resistors and the installation of at least one. You would be best advised to entrust this work to an Amiga repair company who is experienced in this type of work, such as Analogic or Eyetech.

**"I am trying to turn my ailing CD32 into a set top box...."**

Below: The Amiga CD32 or a set-top box?



I'm sorry to hear of your recent bereavement, give my sincere condolences to your A1200. On the subject of the CD32, I cannot really give you a definitive answer as I've not yet heard of anyone 'adventurous' enough to try it. Thinking about it logically though, it should work, but you may need to add SKIPROMUPDATES to the setpatch line in the startup-sequence. Although the CD32 only had one ROM (which did contain OS3.1), it shouldn't be any different to, say, an A500 or A2000 with 3.1. Try it and let us know how you get on. It could give CD32s a new lease of life!



**Hardware**

### What's the time?

Hi,  
I have an old unexpanded A1200 revision 1.D.4 motherboard. I'm thinking of expanding it although I have heard that there may be a problem with these motherboards. What's the problem? Can I fix it myself?

**Glyn Astill**



**Comms**

### Surf's up man!

Dear Guru,  
After updating my Amiga to OS3.9, I am now ready to go online, so could you advise me where I can get a list of ISP's who will support the Amiga? Also do you know if BT Internet support the Amiga?

Hope you can help.

**Dennis Smith**

The Amiga is not really supported anymore as far as software goes, but certainly most ISP's can be used with Amiga software such as Genesis or Miami.

Technical support with your actual suite of programs is something that you will have to gain from elsewhere, such as our mailing list, where nearly all of our subscribers will be using Amiga software of one sort or another. The only ISP that specialises in the Amiga on a technical level is Wirenet, who can be contacted on 01925 791716. A few others have limited Amiga support, usually through an enthusiast on the staff, but we aren't aware of any lists which will give you details of these ISPs I'm afraid.

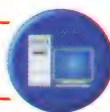
Feeling Blue? Ask the Guru

If you have any technical problems, tips you'd like to pass on, or requests for in-depth coverage of a particular problem, please send them to:

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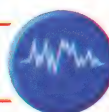
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### A bit shaken up

Hiya Guru,

I'm in a bit of a jam with my Amiga. I have an A1200 with a Seagate HD and a Magnum 68030 + FPU shoved into it. Recently the computer took a knock and now it crashes whenever I try to access the hard disk. Without the accelerator in it seems to work fine but incredibly slowly.

I've tried contacting Power Computing but got no reply. I can't find any details of the manufacturer on the net. Any ideas?

Also how can I get the mag in Leeds?

Cheers for your time and help.

**Chris Bell**

As you state that the machine had a bump, it is advisable to check all the cabling and chips for something that may have come unseated. It is also possible that the crystal oscillator may have been damaged in the fall (as was mentioned by a reader some time ago) but that would normally be evident by the unit not working at all.

I doubt you'll have any luck in tracing Magnum, however, as they stopped manufacturing some years ago, but '030 accelerators are so cheap now that it may be worthwhile thinking about a new unit if yours turns out to be faulty.

If you are experiencing trouble finding the magazine in your area, use the magsave coupon we print in every issue and hand it in to your local newsagent. He can then reserve you a copy each month. Alternatively, a subscription saves you time, money and hassle, as we will post it direct to your door at a reduced rate. See page 57 of this very issue for details.



### Do you, Voodoo?

Hello,

Can I use a Voodoo graphics card with SGRAM (as opposed to SDRAM) on my Mediator card? More importantly, will there be drivers to support it?

**Pat Leckie**

The Voodoo drivers for the Mediator are already available, and in use. The type of RAM on the card was only an issue with the very first version of the drivers provided

## "Can I use a Voodoo graphics card with SGRAM...?"

by Elbox. The latest drivers will be fine with either type of RAM on the Voodoo3. So the answer to your question is a firm and definitive "Yes!"



### Turn it up

Hello dude,

After being away from the Amiga scene for almost six years, I purchased an A1200 (with 880MB hard disk) and an Apollo 1230/40 accelerator board fitted with 8MB RAM. I am using a SCART cable to connect the Amiga to the TV until I can order a scan doubler / flicker fixer.

My problem is with the audio output, which I am feeding to the TV through the SCART lead. When I play a game or anything that uses audio, I seem to get a very feeble signal from the Left and Right connectors. I have to turn the volume on the television to maximum to be able to hear any sound, and even then, the sound suffers from interference problems with a buzzing in the background.

Is this a problem with the A1200 having a feeble output or is my Amiga broken? The SCART cable has been tested on an A500(!) and it works fine. I do not think this is a hard disk issue as the hard disk is a 2.5" model and the metal shielding should still be in place. Many thanks,

**Geoffrey Ma**

You are right to assume it isn't a problem with the hard disk, but it does sound like the output from the video port may be damaged in some way.

The buzzing you are getting from the TV is undoubtedly caused by the fact you have the volume at maximum, and the amplifier will be picking up all kinds of slight noises. In order to narrow the problem down it might be an idea to try using the phono outputs and connecting that to an amplifier of some description.

If the problem persists it could be a faulty sound chip and would need replacing, although this could be a costly process as the chip is surface mounted and a repair like this can only be done at a facility with equipment to handle this.



### Chips with that?

I have a BlizzardPPC 603/200MHz 68060 with FPU, and two days ago the Amiga rebooted for no apparent

reason. Since then the Amiga works, but there is no Fast Memory. After booting with no Startup-Sequence and executing the command 'Avail', only chip memory appears to be available. I think the board has stopped recognizing the Fast RAM (two 32MB SIMMs), as I tried the SIMMs on another board and they are fine. I also tried other memory with my board, and the result is the same. I have even tried another PPC board from a friend of mine on my Amiga and that works fine with my memory.

Have you ever had such a problem? Can it be repaired?

**Ricardo Simoes**

Well Ricardo, it is difficult to diagnose your problem without actually having my hands on your equipment (for want of a better phrase), but it certainly sounds to me like you have a board with a memory bus fault. This is, unfortunately, not unheard of: several other PowerPC owners have experienced such problems. The only course of action is to send it back to DCE via your local Amiga dealer and be prepared for a long wait. Sorry to be the bearer of bad news.

**The Guru**

"...without actually having my hands on your equipment..."



Above: SIMMs: Lazy



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Say WHAT? You must be bonkers!



# Diary of a cyber café

Back in February, the Alt-WoA show needed a network and cyber café. Here's how it was set up.

**W**hen the Huddersfield Amiga User Group (HAUG) asked me to set up a Cyber café at the little show they were planning, I said yes immediately. After all, there's not much to it, is there? My A4000 is already set up as an Internet gateway and has enough serial ports to connect a few A1200s by null modem cable. As it turned out, the show wasn't as little as expected and the cyber café became rather more complex too.

There was only a single phone line available, so bandwidth was severely limited. I didn't even know how good the line was, being unable to run a test beforehand. For all I knew, we could have been stuck with a 33K connection. It turned out to be a good quality line with 48K connects. After a couple of line drops early on, it stayed connected for the final four hours of the show without a glitch.

**"It made sense to use Ethernet instead of serial for the cyber café Amigas too."**

## Saving bandwidth

The lack of bandwidth meant that three people surfing at once would find it really slow. The solution was to use a proxy server. I originally intended to use HTTPproxy on the A4000. This was sufficient for our basic needs, and I could fill the proxy's cache

before the show by using the 'tcpd' utility to leech various Amiga sites through the proxy. AmiBench planned to launch their new site at the show and asked to share the Internet connection. This wasn't practical with a single phone line, so I offered to take my PC as well and host AmiBench2 on that, serving it directly across the network. AmiBench2 makes extensive use of MySQL and there isn't a version of MySQL on the Amiga, so I had to use the Linux PC. Then it made sense to run the proxy server on the PC too.

Not only are Linux proxy servers more advanced than Amiga ones (the latest httpproxy is almost five years old) but it reduced the load on the Amiga, letting it get on with handling all the network operations. There is a Linux proxy server that appears to have been inspired by httpproxy. WWWoffle has a very similar featureset, and a lot more besides. It has a web interface, through which you can instruct it to leech entire sites

into the cache. This meant the cache could be primed with relevant pages, so it could serve them to the cyber café at full speed.

Since the A4000 and PC would be linked by Ethernet, and AmiBench would use the same, it made sense to use Ethernet instead of serial for the cyber café Amigas too.



## "...someone starting a large FTP download would slow down the cyber café for everyone else..."

Serial would have required several very long cables, whereas the Ethernet hub could go on the same table as the A1200s, and use one longer cable to reach into the office where the servers lived. My A1200 already had a PowerLAN card, and Eyetech lent us two more PCMCIA cards for the HAUG club's own machines.

Then Amiga Forums asked to serve their site from the same server to the cyber café Amigas. None of this posed a problem in terms of the load on the web server or the network, but it did present a potential problem where these sites contain links to elsewhere on the Internet. As soon as anyone clicked one of these links, they would be stealing bandwidth from the cyber café.

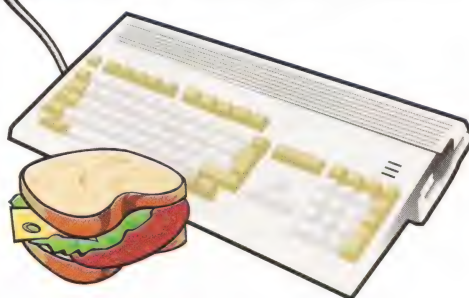
The solution was to use MiamiDx's firewall. Miami Deluxe has two modes of firewall configuration, automatic and manual. Neither was particularly suitable. The automatic set-up is good for protecting a LAN from the outside World. Because of this, it mainly blocks incoming connections to the computers on the LAN, but we needed to block outgoing connections. In manual

mode, the firewall allows you to specify exactly what traffic is (or isn't) allowed to go where. However, this removes the rules set up by the automatic mode, so everything has to be configured from scratch.

### Firewalling

I decided to use a hybrid method, switch the firewall to automatic mode and use the MiamiIPFW command to add extra rules. Each rule specifies a source, destination and type of data, and how it should be dealt with. Traffic is compared against the rules and the first one to match is applied. The first two automatic rules generated by MiamiDx are:

```
01000 allow ip from any to any via 127.0.0.1
02000 allow ip from any to any via eth0
```



The second one allows any traffic through the Ethernet interface (eth0) to pass unhindered. This is exactly what I needed to stop, so it was necessary to add extra rules before this one. The rules I used were:

```
Miami:MiamiIPFW add 1400 deny tcp from any
to any 21 via eth0
```

```
Miami:MiamiIPFW add 1500 allow ip from
192.168.1.0/29 to any via eth0
```

```
Miami:MiamiIPFW add 1600 allow ip from any
to 192.168.1.0/29 via eth0
```

```
Miami:MiamiIPFW add 1700 deny ip from not
192.168.1.0/29 to any via eth0
```

```
Miami:MiamiIPFW add 1800 deny ip from not
192.168.1.0/29 to any via eth0
```

The first disabled all traffic to port 21 on any server. Port 21 is used for FTP and someone starting a large FTP download would slow down the cyber café for everyone else. The next two rules allow all inbound and outbound traffic to machines with IP addresses in the range 192.168.1.0/29, except for the FTP traffic blocked by the previous rule. Wondering what we mean by "192.168.1.0/29"? This is a way of expressing a range of IP addresses. The "29" is a mask, it's a shorthand way of writing

"192.168.1.0 - 192.168.1.7". An IP address is a 32 bit number, the mask of 29 means that the first 29 bits must match the given address, only the last three can vary. A more common variant is 192.168.1.0/24, which allows the last eight bits, i.e. the part after the last dot, to be any value.

The last two rules added prevent inbound and outbound traffic from outside of this address range. This means anything can talk to the server, which was on 192.168.1.7, but only computers with a lower final digit to their IP address could communicate with the Internet at large. The rules are added with numbers of less than 2000, so that they take priority over the default rule allowing all traffic on the Ethernet to access anywhere. Adding rules to MiamiDx's automatic set-up has one disadvantage: the automatic firewall rules are reset any time an interface goes on or offline. This was handled by putting the above lines in a script and calling it as the modem interface's "Online" event.

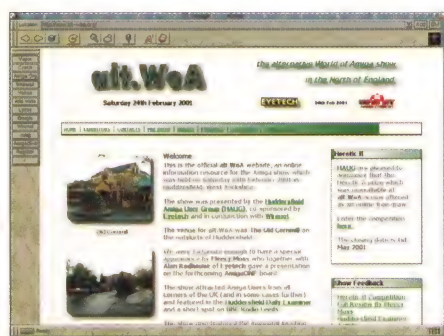
### Starting up

The network was tested before setting off for the show, but with only one A1200. The other two 1200s belonged to the club and weren't available until I arrived at the venue on the morning of the event. This left the question of how to set all the software up on each machine in the short set-up time available. After some experimentation with LZX, I managed to cram AmigaOS, Miami and AmigaNFS (Network File System) onto a bootable floppy. By booting an Amiga from this disk, I was able to access its hard drive from the A4000.

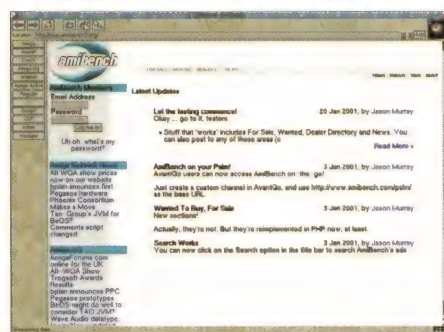
Each of the club machines was supplied with a bare boot partition, so it was simply a matter of booting each one from the floppy disk and copying the pre-configured software across from the A4000. The only change to be made was to update Miami's configuration to give each Amiga a different hostname and IP address. I also changed the default browser so each of the three browsers was fairly represented. Such a network boot disk is also useful if you have a hard drive boot failure, as you can boot from the disk and fix things from another Amiga on the network. Unfortunately, we can't put the contents of the disk on our cover CD: most of it is copyrighted software, but a listing of the contents is there so you can create your own.

Some Amiga zealots may throw their hands up in horror at the thought of a PC being used in an Amiga cyber café, but servers like Apache run best on Linux. Apart from that, everything else was done by the A4000. And MiamiDx's firewall is so much easier to set up than the equivalent in Linux.

Neil Bothwick **A**



Above: xxxxxx xxxxx xxxxxx xxxx



Above: xxxxxx xxxxx xxxxxx xxxx





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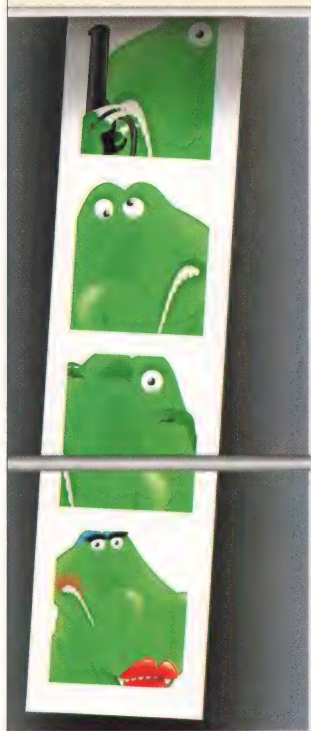
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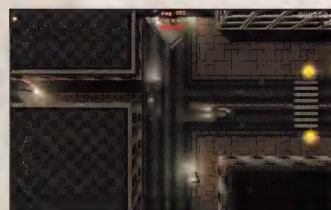




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## Howdy, Audi

Amiga magazines and techno music – only one name could come to mind. We track down one-time CU Amiga Ed. Tony Horgan to find out what he's up to now.



**M**usic-mad computer journalist and erstwhile Editor of the much celebrated CU Amiga has disappeared from the Amiga scene since publishers EMAP closed his magazine down two and a half years ago... or has he? The smiley-faced Pot Noodle lover recently contacted us asking for an Amiga-related favour, so we asked for one in return.

**Amiga Active:** So, Tony, what was the first thing you did when you found you no longer had to work for EMAP? After you cracked open the bubbly, that is...

**Tony Horgan:** EMAP weren't a bad bunch, and as I'd been kicking around their offices for a few years, I managed to screw a few quid from them in sympathy. So I went straight down to the music shops in Denmark Street in the West End and treated myself to a drum machine (Novation Drumstation), synth (Yamaha AN1x) and a Zoom effects processor.

**AA:** What's happened to your other passions besides the Amiga in the last couple of years... still into making music and eating Pot Noodles?

**TH:** Have you tried the new pizza flavour one? It's rubbish! Doesn't taste remotely like pizza, even when you put the sachet of tomato ketchup in it. I've just done some soundtracks for the PSW DVD, a series of short laid-back techno things that loop while you're choosing your games from the various menus. I've recently been using an awesome bit of new software called Reason. It's from the people who did ReBirth383, and it's The Best Thing Ever. [www.propellerheads.se](http://www.propellerheads.se) if you're interested. PC and Mac only though...

**AA:** What's your preferred method of transport these days, a split-screen VW van or something a little more racey?

**TH:** I'm still a major fan of those split-screen vans, but right now I'm getting all lathered up about the impending delivery of my brand spanking new Audi TT Coupe. Okay, so I have to live off Marmite sandwiches for the next five years, but who cares? Actually, that car is The Best Thing Ever. The music software comes a commendable second.

## Actually, that car is The Best Thing Ever...

**AA:** How did you find yourself where you are today?

**TH:** I freelanced as a Production Editor/Sub Editor for a while after CU closed. Then I noticed an advert for production staff to work on a new PlayStation mag (PSW). When I enquired, I found that it was staffed by a lot of former EMAP employees, so I'm sure the "who you know" theory must have helped swing it in the interview. I was impressed by the company's ambitions and took the job when they offered it.

**AA:** So, the PS2... that went off with a bit of a whimper, didn't it? Will it ever be worth buying, or will Microsoft steam in with their X-Box and cause all the Playstation mags to close down? What's your view on the future of the console market, and do you see it involving Amiga at any stage?

**TH:** Yes, the launch was a bit crap. In my opinion, there are currently three games that are worth buying a PS2 for: Gran Turismo 3 A-Spec, Metal Gear Solid 2 and International Superstar Soccer. Trouble is, none of them are out right now, although GT3 might be by the time this is published. I reckon there'll be plenty of decent games by Christmas, which


is when it'll really start selling in large quantities. The X-Box is a funny one. My feeling is that it won't harm the PS2 at all. Microsoft aren't really an entertainment company, and I think that will show as a major weakness when it comes to marketing the hardware. I don't see how the Amiga could figure in any of this.

**AA:** Let's see if you're up to speed with the Amiga market these days: What's the AmigaDE - a German version of the Amiga's operating system or something else?

**TH:** Quite obviously, it's the 'Amiga Desktop Environment', a new project that will facilitate dynamic content to deliver seamless paradigms while incubating world-class functionalities.

**AA:** So, what would need to happen to make you quit your current job and go back to working on an Amiga mag?

**TH:** I'd have to be convinced that Amiga was doing something worthwhile, and actually making computer products that were better and more useful than the PCs that everyone uses today. Or something much more exciting.

Tony now works as Production Editor on PlayStation World magazine. 

## Who's Next?

If you'd like to know what happened to someone from the Amiga's past, write in and let us know. We'll do our best to track them down and fill you in on the details in a future issue. E-mail the Back Page section at [backpage@amigactive.com](mailto:backpage@amigactive.com) or write to the usual address, marking your envelopes 'BackPage'.

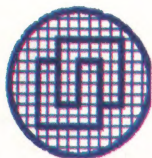


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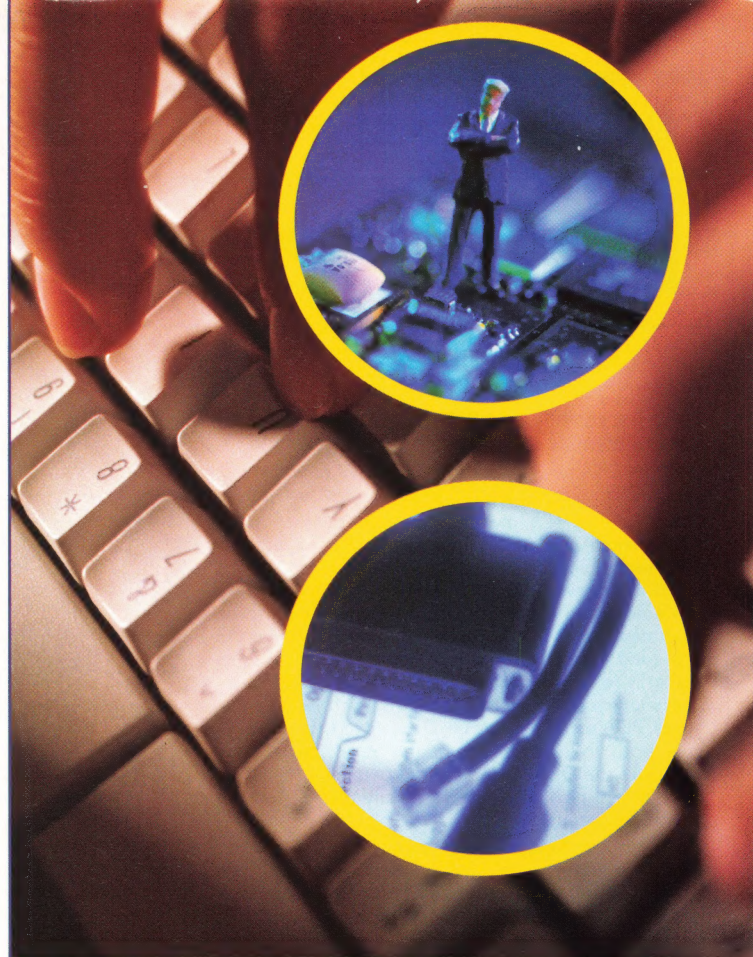
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## Eyeline

## Amiga news from Eyetech

May 2001

### Editorial

#### Amiga Inc commits to a PPC version of the Amiga OS for the AmigaOne

Well the OS4 news is out at last and we now can talk openly about what it means for the Amiga community. Over the last few months we have been working closely with Amiga Inc to ensure that the AmigaOne is the next generation Amiga - and that of course means that it must have a robust, expandable, secure, efficient real time operating system. But that was meant to be the Amiga DE wasn't it? Well yes and no. The Amiga DE is a quite basic real-time operating system designed primarily for single tasking - and certainly single user - operations on embedded systems such as set top boxes, PDA's, cell phones etc. And since these devices have both low power cpu's and very limited user interfaces the DE needs to be free of much of the clutter that we normally take for granted in a desktop operating system.

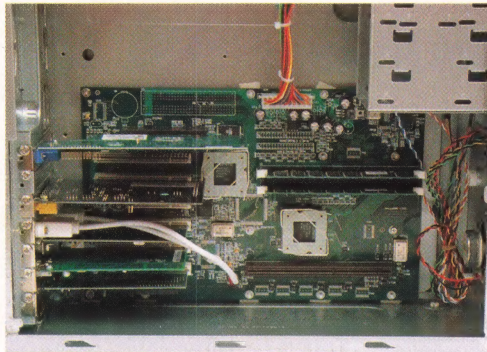
On the other hand a home server - the central box that coordinates all the Amiga DE devices and runs 'proper' desktop applications - needs many more facilities, such as task-level memory protection and OS-level virtual memory, that are not practical to implement within the DE without completely compromising its portability and speed.

#### A documented development path

So what we have now ended up with is the best of both worlds. Desktop Amiga users will have a desktop/server OS, natively coded for the PPC, with added memory protection, virtual memory and a much improved file system, whilst still retaining the efficiency, real time responsiveness, elegance and familiarity of the Classic Amiga OS.

Developing the new OS is to be a 4-stage process:

- OS4.0 will be an updated version of OS3.9 with special facilities added to allow existing classic Amiga applications to run on the AmigaOne, accessing the classic Amiga hardware via the hardware bridge on the AmigaOne 1200/4000. Much of the operating system will still be in 680x0 code with in line instruction conversion to PPC code.
- OS4.2 will add additional features and the recoding of much of the OS in native PPC code. However the major milestone in this release will be the complete retargeting of all operating system I/O away from Amiga specific hardware/chipsets. This means that retargetable 'Classic' applications can be run on the AmigaOne (or any Zico-compliant PPC board) without any 'classic' Amiga hardware present. At this stage the Amiga DE will also be ported to the Amiga OS so that the AmigaOne can be used as a development/porting platform for Amiga DE content (as a more familiar alternative to the currently available Windows/Linux development environments).



The AmigaOne 1200 fitted into an ATX Tower

Drivers will obviously be provided for those resources which are retargeted to the AmigaOne motherboard (USB, sound, graphics, UDMA etc).

- OS4.5 will be an entirely PPC-native, entirely hardware independent version of the operating system, with full driver support for all Zico resources (FireWire, Matrox NG graphics cards, SCSI etc)
- OS5 is a full 64-bit fully distributed SMP operating system which will implement virtual memory, memory protection and the Amiga DE in a fully-spec'd, modular home-server/desktop OS.

OS4.x will only run on PPC boards conforming to the Zico specifications which excludes BlizzardPPC & CyberStormPPC accelerators - even when coupled with a Predator-SE PCI bus. We (and Amiga Inc) are pressing DCE, the current manufacturers of these boards, to come up with a 'Zico compliance kit' to preserve the investment of existing BPPC/CSPPC users and allow them to run OS4.x.

#### Hardware independence & the Video Toaster

Of course this means that - from OS 4.2 on - you will only need a existing 'Classic' Amiga for those few applications that are genuinely not retargetable (ie those that still insist on 'hitting' the classic hardware). All of the existing application software developers we have spoken to are more than willing to port their applications to a fully hardware independent PPC AmigaOne. This also means that by the time we would have scheduled the design and production of the AmigaOne 3000 it would probably be an irrelevant piece of hardware as far as most users are concerned. We're not closing that door just yet, but, because of this hardware independence from OS4.2 onwards we believe that existing Ax000 users will be able to run their applications on stand-alone AmigaOne PPC hardware much sooner than we had originally anticipated. And as far as that most famous of all big-box Amiga accessories is concerned - the Video Toaster - we are going straight round to NewTek ask them to port drivers for their existing PCI-based Toaster to OS4.x as soon as production AmigaOnes are released!

#### Amiga are back at the helm

Finally, one of the most significant parts of the announcement is that Amiga Inc have decided - quite properly in my view - to take their ownership of the Amiga OS seriously. They are taking development control, standards definition and quality assurance for the Amiga OS back in house for the first time since 1984. This is the first step in ensuring that we are no longer blighted with compatibility issues between different software modules, or 'kernel wars' between third party developers. Provided everyone is sufficiently unbiased to see the move in this light there is no reason why Amiga shouldn't choose the best elements from Haage & Partner's WarpOS, Ralph Schmidts's MorphOS, the work from the AROS project team and the existing Classic OS in developing OS4 & 5. The important thing is that we now have - in the shape of Fleecy Moss - a combined helmsman, navigator and Captain for the Amiga OS. And I for one am fully committing our AmigaOne hardware to Amiga's new OS strategy - for the sake of forward compatibility and reliability - and without the diversion of seeing if we can get Linux, MorphOS or anything else running on the AmigaOne board.

#### Predator-SE brings new levels of functionality to A1200 users.

As reported in a previous issue of Eyeline, last Autumn we came to an agreement with DCE to merge our Predator-SE design with their own G-REX PCI expansion. The result was an enhanced product over both the original Predator-SE and G-REX specifications. Part of the agreement was that Eyetech would distribute the boards to dealers in the UK with Vesalia handling distribution to German dealers (both at the same trade prices) and this agreement that has recently been ratified by the parties involved. End users are of course free to purchase the boards under the Predator-SE (or G-REX) name from whichever dealer they choose, at home or abroad.

#### ATX enabled?

If you are thinking of purchasing a Predator-SE or G-REX expansion board for your A1200 then please remember to check that your board is shipped with the power switch microprocessor socket populated - or you will not be able to use an ATX power supply in your tower either now or in the future. Please also note that we have some very special bundle deals on the Predator-SE with VooDoo 3 and SiS graphics cards and PCI network cards - see the panel below for details. And if you have an EZTower-Z4 case we will give you £5 extra credit if you return the ATX power supply adapter - shipped with the tower but no longer needed with the Predator-SE - to us. That makes the net cost of a Predator-SE just £139.95! Drivers for a PCI audio card should also be finished by the time this issue of AA is published - please ring for more details.

*See you next issue. Alan.*

#### New EZMouse PS2- to-Amiga mouse adapter + super mice bundles

Following requests from our customers we have brought in a new range of hi res mice/EZMouse bundles. All bundles come with commodity software allowing you to assign the 3rd/4th/buttons &/or scroll wheel to Amiga functions such as screen flipping, window scrolling etc.

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- EZMouse plus 520dpi 3-button mouse - £29.95
- EZMouse plus EZKey-SE/P + infrared keyboard with mouse facility - £59.95
- EZMouse+ free 2-button PS/2 mouse - £19.95

#### Special Limited Stock offers This Month Only (until 31-05-01)

Only 1 to 10 units of each item remaining. Don't delay - when they're gone, they're gone!

- Micronik A1200 Z2 board + video.en £69.95
- Classic Squirrel PCMCIA SCSI interface £39.95
- Amiga Classic OS3.5 (new, boxed) £19.95
- Aladdin 4D modelling/rendering s/w £29.95
- IOBlitz 1.5Mbps clock port serial i/f £24.95
- BVision 8MB graphics cards for PPC £129.95
- LS120 120MB/1.44MB super floppy £59.95
- ISDN terminal adapter (external) £69.95
- 1260/75LC 59 Mips Amiga accelerator £139.95

#### The Predator-SE

##### The 5-slot PCI expander for your A1200

- Predator-SE alone £144.95
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  - Predator-SE + 8MB SiS gfx and 10/100Mbps network card £189.95
  - Predator-SE + 16MB VooDoo3 gfx and 10/100Mbps network card £234.95
- Deduct £5 if returning an EZTower-Z4 ATX power adapter with your order.**



**This is just a small selection from our vast range of Amiga products and accessories. Please see our web site, see our full price list on this months AmigActive CD or send 39p in stamps for a full product listing and price list.**

## EZTower and Tower accessories

**EZTOWER OPTIONS** - The EZTower-Z4 is the latest state-of-the-art tower specifically designed to take the A1200 Z4 expansion bus-board. Available as a DIY kit, ready assembled or via our fitting service.

**EZTower Mk5** with 250W PSU, 6x 5.25" bays & 3x 3.5" bays, floppy drive cable & faceplate, LED adapter and full instructions. (62x42x19cm) **£89.95**

**EZTower-Z4** with 250W PSU, 3x 5.25" bays & 4x 3.5" bays floppy drive cable & faceplate, LED adapter and full instructions. (48x44x18cm) **£99.95**

## EZTOWER ACCESSORIES

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**EZKey-SE/A** CIA-fitting A4000 keyboard adapter for A1200/A600/A4000. 5pin DIN socket **£18.95**

**EZKey-XS** CIA-fitting PC/A4000 autodetecting keyboard adapter for A1200/A4000 with xMON control, infrared decoding for CDTV remote with full alphanumeric mapping, 4 x PC keyboard mappings, keyboard operated ATX PSU on/off control etc. 5pin DIN socket **£39.95**

## Z4 BUSBOARDS AND BUNDLES

**Z4-Bus** A1200 expansion busboard 5x Z2 slots, including 2 x high speed slots & video slot, 2x Z4 slots for future ultrafast cards, 4x clock ports and accelerator pass through connector **£99.95**

**Z4-Bus & CV64-3D** graphics card **£249.95**

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**Z4-Bus & CV64-3D, INFF2, AMON/F** **£369.95**

**Z4 Tower, Z4-Bus, PC k/b, EZKey-SE** **£199.95**

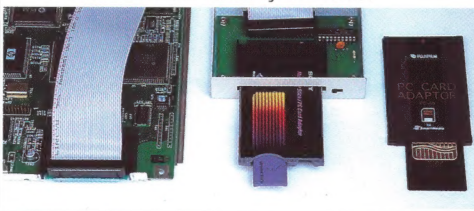
**Z4 Tower, Z4-Bus, CV643D, EZKey-SE** **£349.95**

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The EZCam hardware extends the PCMCIA slot so it can be mounted in a 3.5" drive bay for easy access and adds hardware logic to allow digital camera cards (memory stick, smartmedia, compactflash) used with a PCMCIA card adapter (not included). When used with the supplied driver the camera card automatically mounts as a drive on the desktop, allowing picture files to be copied or displayed directly. A front panel switch disables the additional logic for full compatibility.

The EZCam is available now at just £49.95.



**MASPlayer** - an MP3 player which works with all Amigas from the A500 upwards. The MASPlayer uses the same hardware decoder chip used by the award-winning Diamond Rio MP3 players. It plugs into the parallel port, has a 3.5mm mini stereo output jack and draws its power from a pass-through connector on the serial port. Unlike software MP3 players it makes very low demands on the CPU allowing full, usable multitasking. The MASPlayer supports all bit rates (including variable bit rates) when used with an '020 cpu or above and gives excellent sound quality. It is ideal for turning your old Amiga into a sophisticated MP3 player, or simply as an add-on to your existing configuration. The MASPlayer is now in stock priced at just £69.95

**A1200 ACCELERATORS** '030 from £44.95, '060 fr £179.95  
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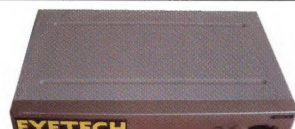
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This SDK is a good first look at the architecture and framework of the new Amiga Operating System.

It is designed to introduce Virtual Processor (VP) coding: the language of choice for the new Amiga OS. With it, developers can begin creating tools to aid themselves and others in porting and creating applications.

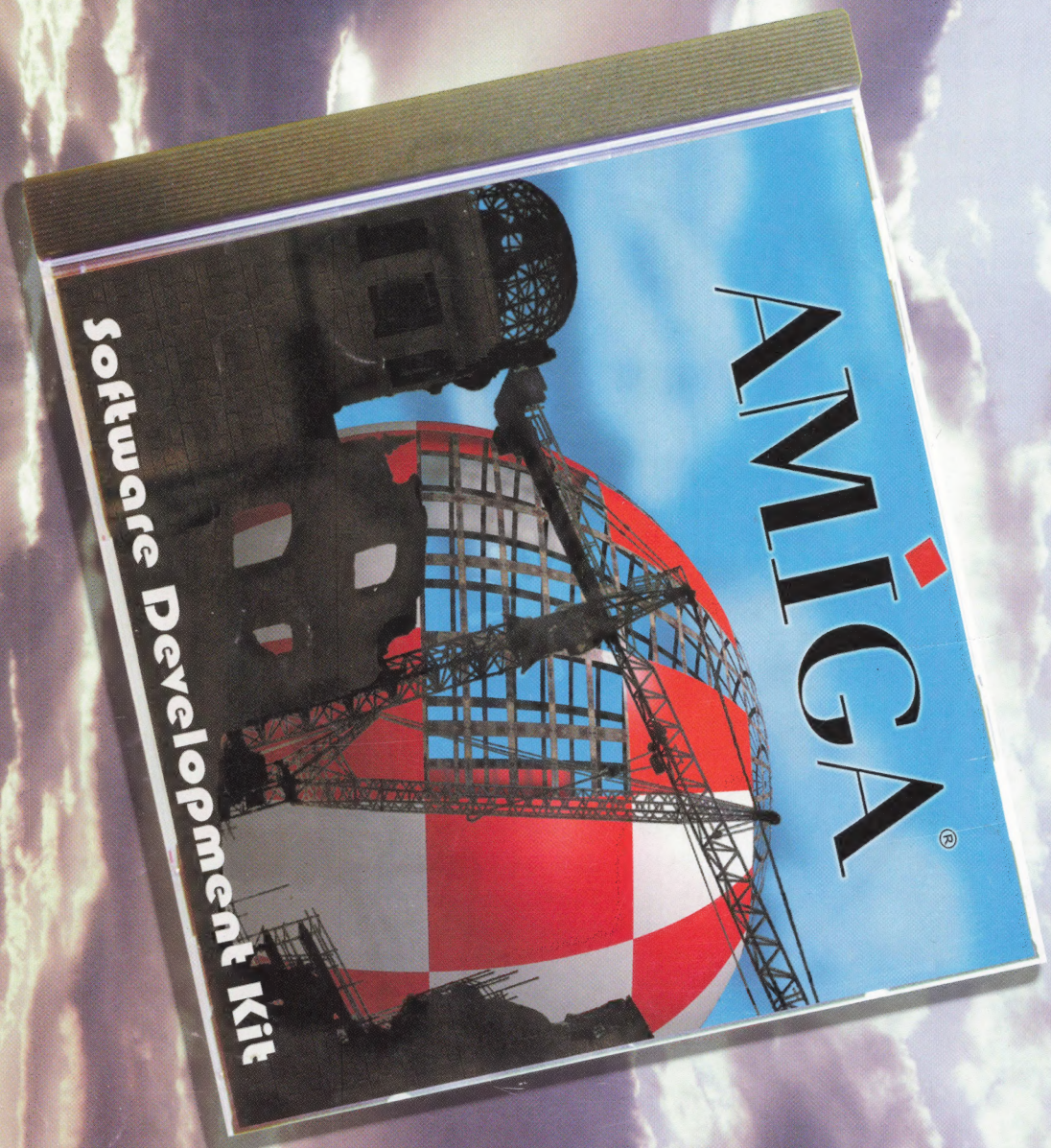
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**System Requirements:**

- A compatible AMD or Pentium Processor based personal computer.
- Red Hat Linux 6.1 running XFree86
- 32 MB of RAM (64 recommended)
- 100 MB of hard drive space.

Developers may contact Amiga Inc. by phone at the **Amiga support line: +1 425-396-5640** or get more information at <http://www.amigadev.net>

Some portions of the AmigaDev site will be under NDA. If you wish to obtain an NDA, simply e-mail your request to [developer@amiga.com](mailto:developer@amiga.com)



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